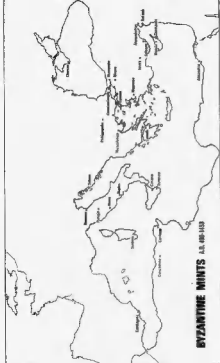




Fig. 310. *Επασπρον ασπρον τραπεζή* Nikephoros II (1081/1082)  
Cat. No 310 Aspron trachy coins of Nikephoros II (1081/1082)



# BYZANTINE COINS

## AND THEIR VALUES

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With almost a millennium of continuous development the types of the Byzantine coinage obviously underwent many changes, and the products of the late period bear little or no resemblance to those of the sixth century. But the Byzantines were a very conservative people and although the changes appear drastic, viewed from this distance of time, it was in fact a very gradual process and old patterns died very hard. For example, the old style Roman profile bust, abandoned quite early for semi-copper denominations, and even earlier on the gold solidus, was retained for the finest gold (aureus and tremissis) until the end of the seventh century.



Tremissis of Justinian II (565-578)

Solidus of Theophilos of Justinian II (527-55)

With his great reform of the coinage in c. 408 Anastasius introduced a series of new copper denominations of revolutionary design—the most prominent feature of the reverse type being a Greek letter indicating the value in *nommi*:  $\alpha$  for 40 *nommi* (= *skella*),  $\beta$  for 20 *nommi* (half *skella*),  $\gamma$  for 10 *nommi* (denominations),  $\delta$  for 5 *nommi* (denominations). From the time of Justinian, the emperor's regnal year was added as part of the design, normally on either side of the mark of value. These reverse types on the pattern for the copper coinage for the following three centuries, though many other designs crop up from time to time, usually on the lower denominations. Anastasius himself even produced a very rare, and only recently published, series in three denominations (40, 20 and 10 *nommi*) having the seated figure of Constantinople as its reverse type.

The obverse types on the copper coinage during this early period show a transition from the typically Roman profile bust (standard for all denominations under Anastasius) to the typically Byzantine facing bust, introduced by Justinian in A.D. 528/9. The profile bust still lingered on, for some types of the lower denominations, well into the seventh century. On some issues from the Theophilos (Anastasi) mint Justinian is depicted *anastasia* facing, in sharp contrast to the stereotyped profile bust which were being produced by the other mints at the time. Most of the copper coins of Justinian's



Solidus of Justinian II (565-578)

Solidus of Justinian II (565-578)

successor, Justin II, shows the emperor and empress confronted side by side, and double-figure and even triple-figure obverse types became very common in the seventh century.

In the previous metals the types at first conformed to the pattern set by the late Roman coinage—three-quarter facing military busts on the solidi (a type originated by Con-

stantius II in the fourth century), profile busts on the semisses and triaunces, and all with Victory *anastasia*. The silver, which was issued very sparingly, has a profile bust of the emperor with reverse type standing emperor or native inscription in wreath. Under Justin I (518-527) an important change occurs on the solidus reverse: instead of the familiar female Victory a male angel becomes the standard type and remains so, except under Justin II and Tiberius II, for almost a century. The short reign of Justin I and Justinian I (April-August 527) produced a very attractive obverse design for the solidus, showing the two emperors confronted side by side.

The change from three-quarter face to full facing bust on the solidi took place during Justinian's reign, but otherwise his precious metal types struck at Constantinople follow the example of his predecessors, often retaining type. As the newly established imperial mint at Ravenna, however, often was struck in greater quantity and with a variety of reverse types, including some bearing the trademark of value, e.g.  $\alpha$  (120 *nommi*) and  $\beta$  (60 = 125 *nommi*).



Solidus of Justin II (565-578) and Tiberius II (578-602)

The reverse type for the solidus was again changed in each of the two succeeding reigns, Justin II introducing a seated Constantinople type, later again re-adopted, and Tiberius II a cross potent on steps type, which was later used by Heraclius and his successors up to the time of Leo III. The semisses and tremisses reverse types were also changed by Tiberius II during his short tenure of power, the cross potent being adopted for both, though with a globe beneath in the case of the higher denomination. Maurice (582-602) reverted to the angel type for his solidi, while for the semisses he used a new Victory *anastasia* reverse, similar to the old tremissis type. The tremissis itself retained the cross potent design originated by Tiberius II, and this coin became the standard reverse for the denomination. A new silver type appears to have been introduced



"Circumscript" silver of Constant II (641-668)

Solidus of Constant II (641-668)

During this reign, the so-called "Circumscript" coinage. These pieces, of various denominations, bore the distinctive type of cross potent between two palm-branches on their reverses, and were issued side by side with the normal silver currency up to the early years of the eighth century.

Placed continued his predecessors' reverse types on his precious-metal currency, and in the "Circumscript" silver series struck an unusually large denomination, the 4 *skella*, with a traditional profile bust on the obverse, and the usual reverse type. The next reign, that of Heraclius, set the pattern for the following century—cross potent on steps for the solidus, cross potent on globes for the semisses and plain cross potent for the tremissis. The solidus obverse types became more varied, with two busts or three standing figures sometimes replacing the single imperial portrait. One remarkable solidus, of the reign of Constant II, has the bust of the emperor on the obverse and the

standing figure of his three sons as the reverse type. The fractional gold, however, strictly maintains the conventional design but omits the signs of Justinian II, i. e. Constantinople, and still lists at the mint of Syracuse. The new silver denomination introduced by Heraclius—the hemigram—bore the same basic reverse



*Hemigram of Heraclius (510-41)*      *Solidus of Justinian II (first reign, 685-95)*  
type throughout the period of its issue, namely cross gilded on steps with inscription around.

The reign of Justinian II (685-95 and 705-11) marks a turning-point in the development of Byzantine numismatic iconography. Around the year 682 the emperor placed upon his gold coinage the first representation of the bust of Christ, and also for the first time all three gold denominations showed the same basic type. The emperor—depicted in a standing figure—was now relegated to the reverse of the coin and described as the "servant of Christ" in the accompanying inscription. Because of the great iconoclastic controversy which engulfed the Empire from the time of Leo III (717-41) the further development of types portraying holy subjects was delayed for a century and a half: it was not until the reign of Michael III (842-67) that Christ reappeared as the obverse type on the solidus.

During the years of iconoclasm (circa 726-842, with interlulls), when the veneration of religious images was forbidden by law, coin types reflected the mood of the times by concentrating very much on imperial portraits, even when the subject was long dead and



*Solidus of Constantine VI and Irene (780-97)*      *Milvotinus of Nicephorus II (863-9)*  
buried. Thus, in one extreme case, a coin of the late reign of Constantine VI and his mother Irene has the busts of the two rulers on the obverse, while the reverse is devoted to the sacred representations of the three previous emperors, Leo IV, Constantine V and Leo III. The style of portraiture also became very stereotyped during this period and remained so for some time, even after the end of iconoclasm. Byzantine numismatic art did not blossom again until after the Macedonian Dynasty had firmly established itself, towards the end of the ninth century.

Leo III introduced a new silver denomination—the milvotinus—with obverse type cross gilded on steps and reverse, inscription in several lines (usually five) occupying the entire field. This design remained basically the same for about three hundred years, though in the tenth and eleventh centuries the obverse was often further embellished by the addition of one or two imperial portraits.

The types of the copper coinage, which was not issued in great quantity throughout most of the iconoclast period, followed the gold in the multiple representation of members of the imperial family. The traditional motif of value (*M*, *li*, etc.) still appears as the main reverse type, or as part of a more complex design, but after the time of Constantine V (741-755) only the mark "M" was used. Under the last Heraclian emperor, Theo-

philus (820-42) an important change was made in the reverse design of the Constantinopolitan copper: instead of the large "M" type, a four-line inscription was substituted, and this form of reverse design persisted even after the introduction of the Anonymus Bronze Coinage by John Tzimiskes (969-76).

The final collapse of iconoclasm in the mid-ninth century marked the beginning of a gradual recovery for Byzantine religious art, and the bust, or enthroned figure, of Christ became the normal obverse type on the Constantinopolitan gold from the latter



*Solidus of Leo VI (886-912)*      *Anonymus folles of the time of Basil II (976-1025)*  
part of the reign of Michael III (842-67). The representation of the Virgin first occurs on a solidus of Leo VI (886-912) and the same coin also exhibits an extremely realistic portrait of the emperor, quite unlike the representation common in the iconoclast period. The earliest appearance of a saint is on a rare solidus of Basil I, Alexander, who is depicted being crowned by his holy son-in-law. Also during this period the motif of Christ was having to highly distinctive copper coins, usually with crosses and letters or monograms as the main types, but sometimes also with imperial portraits.

An important development in the tenth century was the introduction of the first copper pieces to bear the bust of Christ—the well-known "Anonymus Bronze Coinage." First struck by John I (969-76), these issues replaced folles with imperial portraits for almost a century, until Constantine X (1059-67) reintroduced imperial types. The obverse and reverse designs of the "Anonymus Bronze" numismatic series for the first half-century of their issue—bust of Christ/inscription in four lines—but after 1028 the types became increasingly varied, and on the later varieties the reverse sometimes shows a bust or figure of the Virgin, sometimes a cross of very varied form.

The tenth and eleventh centuries also produced some very attractive designs on the precious metal coinage. Nicephorus II (963-9) and his successor John I both issued gold with finely engraved reverse types showing the Virgin and the emperor, and the gold of Basil II produced an exceptional silver coinage with a bust of the Virgin on the obverse, holding before Her the sinless head of the infant Christ. Another beautiful



*Milvotinus of Romanus III (1028-34)*

Virgin type occurs on a gillennion of Romanus III (1028-34) where she is shown holding the Christ child on Her left arm, a very rare representation on Byzantine coins. Despite the rapidly deteriorating political situation in the latter part of the eleventh century

the coin types for all mints remain varied and interesting. A particularly unusual design appears on the gold *stamenon* coinage of Romanos IV (1068-71)—Christ between the emperor and empress on obverse, and the emperor's three sons on the reverse.

The Age of the Comneni and the Angeloi saw the introduction of a number of saints as coin types. St. Demetrios appears for the first time on the Thessalonian coinage of Alexios I. St. George occurs on *electrum* trachets of John II. St. Theodore is represented



*Aurei* of Manuel I (1143-80)  
showing St. Theodore

with Manuel I building a pantheistic cross between them, whilst St. Constantine makes his debut on gold, electrum and billon of Alexios III. The Archangel Michael who figures as coon of Isaac II, though he had already made one earlier appearance on a very rare *stamenon* coinage attributed to Michael IV or V. *Imperatrix* thus innovations the coinage of the twelfth century maintains its continuity with earlier periods, the bust or figure of Christ or the Virgin forming the usual obverse type, with a representation of the emperor on the reverse. A variety of the bust of Christ type was introduced by Manuel I (1143-80) showing the Saviour beardless and holding a scroll instead of the usual book of Gospels.

With the disaster of 1204, the Byzantine coinage broke with many of its old traditions and the types of the Late Empire begin to show signs of increasingly strong Western influence. The coins of the Latin Empire, and of the "Despotate of Epirus" prior to the re-establishment of Byzantine power in 1261 exhibit many novel designs, examples of these being Saint Peter and Paul embracing (Latin Empire); head of cherub and *despot* (Empire of Nicea); and eagle standing facing with wings spread (Empire of Thessalonica). But the mastery of the plastic arts during this confused period were of remarkably conventional design. St. Demetrios is prominent on the coinage of Thessalonica, and St. Tryphon, the twin of Nicetas, appears on the Magisterial issues of Theodore II and Michael VIII.

The coin types of the first period of Byzantine history—the Palaeologan Dynasty—exhibit some interesting designs, though Western influence is quite obvious from the closing years of the thirteenth century. Under Michael VIII (1261-82) a new reper-



*Gold hyperpyra* of Michael VIII (1261-82) and Andronikos II (1282-1328)  
restitution of the Virgin, rising from the walls of the City, was employed for the gold.  
This became the norm for the obverse of the hyperpyron until the abandonment of gold

coinage in the mid-fourteenth century. The reverse of Michael's coin has the emperor kneeling before Christ, supported by the Archangel Michael, an archbishop, or somewhat modified, design. Andronikos II (1282-1328) does homage to a standing figure of



*Gold hyperpyra and other variations (grossi)* of Andronikos II (1282-1328)

Christ on his first hyperpyron issue, but the type is changed to Christ standing between two kneeling emperors for the joint reign with Michael IX (1295-1320) and Andronikos III (1320-45). A rare hyperpyron of John V with his mother Anne of Savoy (1341-7) has the emperor and empress on obverse, and Andronikos III, the emperor's deceased father, kneeling before Christ on reverse.

Silver was issued in reasonable quantity by several of the late Byzantine rulers. Andronikos II based his type on the Venetian grosso, and the commonest variety had Christ enthroned (obverse) and two emperors kneeling in prayer (reverse). Andronikos III (1328-45) is depicted with St. Demetrios on his side silver *lepton* (reverse). There are a considerable number of types known for the reigns of Anne of Savoy (1341-7), the joint reign of John V and John VI (1347-55) and the sole reign of John VI (1355-8), but all are rare or very rare. One type of outstanding interest has a bearded figure of St. John the Forerunner on the obverse. The last Byzantine silver coin, issued in various



*Silver half hyperpyron and small copper* of Manuel II (1381-1421)

silver by the emperors John V—Constantine XI, revert to a more conventional design with bust of Christ on obverse and bust of emperor on reverse.

Early Palaeologan billon and copper are extremely varied, and many new types were employed in addition to the usual array of holy personages. St. Nicholas appears on a billon trachet of Michael VIII, and the head of a saint, with six wings, as a coin of the joint reign of Andronikos II and Michael IX. The same joint reign produced another type of exceptional interest, a three line inscription "THE MARRIAGE"—the only Byzantine coin which makes specific mention of one of the provisions of the Empire.

In contrast to the great activity in the early part of the period the final century produced little variety in the types of the copper coinage. Typical of the later copper designs are: St. Demetrios on horseback, sometimes accompanied by the emperor (Manuel II); standing figures of Saint Helena and Constantine; and Christ standing within oval compartment (both types occurring under Manuel II and John VIII). The usual reverse for these coins is a bust or standing figure of the emperor, but sometimes the four-letter cipher of the Palaeologs is used instead.

In concluding this survey of Byzantine coin types it must be stressed that the vastness of the subject demands a much fuller treatment than it is possible to give here. This interested reader who wishes to pursue the subject in greater detail is recommended to refer to Dr. P. D. Whitting's excellent work, published earlier this year by Heriot and Watson, entitled "Byzantine Coins".

## MINTS

THE more extensive system of Roman provincial mints, dating back to the third century A.D., had collapsed by the time of Augustus' accession, when only *Caesareaugusta* and *Thasoslaurea* remained in operation.

After the reform of 498 *Nicomedia* was re-constituted to assist the metropolitan mint in issuing the new denominations of the copper coinage. Later in the reign *Antioch* was brought into operation, so by the time of Anastasius' death (518) four mints were producing coinage. The next reign, that of Justin I (527-57), saw a further extension of the mint system with the re-opening of *Cyprus* and *Alexandria*, and for the first time in the Byzantine period *Thasoslaurea* struck copper denominations.

Justinian's conquests in Italy, North Africa and Spain necessitated the establishment of more minting centres to serve the needs of the new provinces. Accordingly, *Carthage* commenced operation in 533/4, *Rome* and *Ravenna* about 540, and *Constantinople* towards the end of the reign. Other mints were also active during this period of expansion—*Cherson* in the Crimea, and others less carefully identified, such as *Constantine* in Nuzidia, *Pempe* and *Salona*. This was the high-water mark of the Byzantine provincial mint system and at various times during Justinian's long reign (527-65) at least fourteen mints were operational.

For the remainder of the sixth century the pattern of mints remained fairly stable, and *Maurice Tiberius* (582-602) even opened two new establishments in Sicily, at *Gela* and *Syracuse*. The latter was destined to play an important role from the mid-seventh to the sixth century. But the troubled times of the first half of the seventh century saw a rapid reduction in the number of Byzantine mints. *Antioch* was the first to go. The Syrian capital does not seem to have issued any coinage since the reign of Phocas (602-10) and in 638 it was lost to the Arabs following the disastrous battle of *Jarmuk*. *Alexandria* was used as a mint by Heraclius during his revolt against Phocas (610-12) but once he was established on the Byzantine throne he no longer required its services and it was closed down. *Nicomedia* and *Cyprus* both closed towards the end of the 620's and *Thasoslaurea* soon afterwards, though this mint was again to play an important part in the eleventh to fourteenth centuries. Another heavy blow to the Empire was the loss of *Alexandria* to the Arabs in 646 and this great metropolis, unlike *Antioch*, was never again re-captured by the Byzantines. *Carthage*, the western outpost, finally fell to the *Visigoths* about 629 and ceased issuing its very distinctive coinages. New mints did operate briefly during *Heraclius*' reign (610-41)—*Selucia*, *Isaura* and *Caesarea* in *Cyprus*, but this made little difference to the general trend towards closure, and by the latter part of the century only *Constantinople*, *Carthage*, *Syracuse*, *Rome* and *Ravenna* remained in regular production. It seems almost certain that Italian mints other than *Rome* and *Ravenna* were also operating at this time, and in the early eighth century, but they have not yet been positively identified, with the exception of *Napoli* (*Neapolis*). This mint was opened by *Constantine III* (681-88) and its copper issues bore the mint mark "na".

The advancing tide of Arab conquest eventually engulfed *Carthage* at the very end of the seventh century, but the Byzantines had foreseen the catastrophe and removed the mint establishment to a safer location, probably in *Sardinia*. After only twenty years of operation, however, this mint too was forced to close through Arab pressure. Later in the eighth century, during the reign of *Constantine V* (741-75), the *Leontidae* began seriously threaten the Byzantine-held cities of *Rome* and *Ravenna*. The latter ultimately fell to the aggressors in 751, and the Pope, instead of appealing to the Byzantine emperor for help in defending *Rome*, appealed to the Frankish King *Pepin*. This was because of



*Thasoslaurea* (Antioch): half follis of Justinian I from the third officina



*Cherson*: follis of Maurice Tiberius



*Constantinople*: follis of Tiberius II, from the first officina (regnal year first)



*Cyprus*: follis of Justinian I, from the second officina (regnal year fourteen)

the Iconoclast movement which was at full swing at Constantinople at the time and which was regarded as heretical by the Roman Church. Thus Byzantine influence, and with it the obolus, ceased in Rome.

In the course of two centuries the number of mints issuing Byzantine currency had been reduced from over a dozen to a mere two—Constantinople and Syracuse, and even the latter appears to have been temporarily inactive towards the end of the eighth century. This was the pattern for the following century, though Thessalonica (829-62) appears to have issued some of its coin for a provincial issue (or mints) as yet unidentified. An Italian mint, perhaps Naples, also operated sporadically in the first half of the ninth century, producing solidi of very damaged metal. Late in the reign of Michael III (843-67) the mint of Cherson, which had been inactive since the end of the sixth century, began producing a very distinctive copper coinage of cast fabric. These issues continued for over a century, the latest examples being of the reign of Basil II (976-1025).

The long and important career of the mint of Syracuse was brought to an end in 878 when the city finally succumbed to Arab conquest. This left Constantinople as the sole mint for the previous-metal coinage, though its copper issues were supplemented by the products of Ghazni, up to the latter part of the tenth century, and by those of an uncertain provincial mint during the reigns of Basil I (867-86) and his son Leo VI (886-912).

For the greater part of the eleventh century Constantinople seems to have supplied all the Empire's currency requirements without the assistance of provincial mints, though it is possible that some of the "Anonymous Bronze" was produced by establishments in Greece and Asia Minor. With the reign of Alexios I (1081-1118) the issues of a secondary mint, undoubtedly Thessalonica, are clearly discernible, and for a short time after the triumph of the culture in 1099 another mint, possibly at Philippopolis, was operational. Constantinople and Thessalonica provided almost all the coinage during the Age of the Comneni and the Angel, but a series of small coppers did emanate from some other mint (perhaps Gennadi) during the reigns of Manuel I, Andronikos I and Isaac II. The usurper Isaac Comnenus (1143-51) issued notes on the island of Cyprus, and likewise was probably the main, though not the only, mint.

Following the Latin conquest of 1204 the Byzantine Government went into exile to Asia Minor and at first issued its coins from the new capital, Nicaea. Later, however, the mint was transferred to Magnesia and it was here that most of the coinage of the Empire of Nicaea was struck. Thessalonica was also active following its recapture from the Latins in 1236, both as the capital of the Empire of Thessalonica and, later, under the Nicaean emperors (from 1246).

Little work has been done on the mint system of the Palaeologan period, but Constantinople undoubtedly produced the bulk of the coinage down to 1453. Thessalonica seems to have maintained its position as an imperial mint well into the fourteenth century, and it is quite possible that other distant issued currency at various times during this long and troubled era. If so, future research will surely reveal their identity and help to fill the veil from this most recent, but in many ways least known, period of Byzantine history.

The following is an alphabetical listing of all the Byzantine mints, including those which have not yet been identified with certainty. Where applicable, the various forms of mint marks have been noted, but it must be pointed out that as a general rule coins do not bear obvious mint marks after the early years of the eighth century. Even before the gold and silver coins bore any letters indicating the exact place of coinage, and attributions rest on other criteria such as type, style and fabric. These points are marked on in the notation as *Identification*.

**Alexandretta** (north of Antioch): *ARABANA*. Operational 509-10.

**Alexandria** (ARAB, AND OR). Operational circa 525-666.

**Antioch** (Thessalonica issues changed after great earthquake in 526): *AN, ANIC, ANTI, ANTIC, P, ANICIA, AN, ANE*—these are numerous varieties of mint mark for "Thessalonica." Operational circa 513-666.

**Carthage**: *CAR, KAR, KAR, CT, CRY, KRTY*. Operational circa 513-695.

**Carthago** (in Spain): operational circa 560-520.

**Castella** (in Sicily): *CAT*. Operational circa 583-629.

**Cherson** (in the Crimea): *CHERONON, CHERONON, H, HIL*. Operational under Justinian I (527-61) and Maurice Tiberius (582-602) and later, from the time of Basil I (866-86) to Basil II (976-1025).

**Constantia** (in Cyprus): *KONFON, KONF, KPNF, KPN*. Operational 610 and circa 626-8. **Constantia** (in Nicaea): *KON*. Operational specifically from year 14 of Justinian (540-41) to year 11 of Maurice Tiberius (592-3).

**Constantinople** *CON, CONON, CONO, CON*. Operational throughout the period, though it was not under Byzantine control from 1204 to 1261.

**Corinth**: operational under Manuel I (1143-87), Andronikos I (1185-5) and Isaac II (1185-95): *corinthensis* (miswritten).

**Cyprus**: *KY, KY*. Operational 518-629.

**Isaura** (in the Cilician Mountains): *ISAVS*. Operational 617/8.

**Magnesia** (western Anatolia): operational circa 1236-61.

**Naples**: *NC*. Operational from Constant II (841-66) to Theodorus III (976-7), and possibly again in the first half of the ninth century.

**Nicaea**: operational circa 1204-14.

**Nicomedia** (NIG, NIG, NIG, NIG, NIG, NIG, NIG). Operational 486-625.

**Nicosia** (in Cyprus): operational 1094-91.

**Perugia** (in Umbria, central Italy): *P*. Operational during year 28 of Justinian (552-3): *peruginensis* (miswritten).

**Philippopolis** (Thrace): operational for a short period following the monetary reform of 1092.

**Ravenna** *RAV, RA, RA, RAVNA, RAVENNA*. Operational circa 540 till the early part of the eighth century; captured by the Lombards in 751.

**Rome**: *ROM, ROM, ROMA, RM, ROMAN*. Operational circa 546 till the reign of Constantine V (741-75).

**Sabona** (on the Dalmatian coast): no mint-mark. Operational during the reign of Justinian I (527-65).

**Sardis** *SD*. Operational circa 695-715.

**Selyucia** (in Isauria, southern Anatolia): *SELUC, SEL*. Operational 515-7.

**Synnesion** (SINCLA, SCL, SYNANON). Operational from the reign of Maurice Tiberius (582-602) till its capture by the Arabs in 678.

**Thessalonica**: *TES, ENC, TH, THESON, THON, THON*. Operational from the beginning of the period till 630, and again from Alexios I (1081-1118) till the middle of the fourteenth century.

In addition to the basic mint marks given above, many coins, up to the early part of the eighth century, also bore an "officina letter" indicating the particular division of the mint establishment which was responsible for the issue. These officina marks were in the form of Greek letter-vocals (*A, B, P, A, B, etc.*) and in the case of the larger copper denominations they were normally located immediately beneath the mark of value on the reverse. With the smaller denominations the officina mark was sometimes omitted altogether, as it was on silver coins and gold semisses and tremisses. Gold solidi coins always bore the mark of the responsible officina and it was located at the end of the reverse legend. Thus the inscription "VICENTIA AVONC H" would occur on a solidus issued from the eighth (C) officina of the particular mint.



added more unusual denominations to its repertoire—the 35 *nummi* (AR), the 6 *nummi* (S) and the 3 *nummi* (T). Another mint to issue a series of copper denominations peculiar to itself during Justinian's reign was Thessalonica, where 34 *nummi* (S), 8 *nummi* (S), 4 *nummi* (S) and 2 *nummi* (S) were struck. With the westward expansion of the Empire in the mid-fifth century the Latin influence is visible in some of the coins struck in Italy, with its sometimes replacing *l* for the half *solidus*, *s* replacing *l* for the *denarius* and *v* instead of *s* for the *penusnummus*.

Silver issues at Constantinople continued to play only a very minor rôle, even under Justinian, but at the same western mints the metal was much more liberally employed.



*Solidus of Justinian I, "Globular" solidus of Heraclius, Light-weight solidus of Justin II, struck at Carthage*

The *solidus*, half *solidus* and quarter *solidus* were produced, together with other pieces bearing their marks of value in *nummi*, not for the 250, nor for the 125 and not for the 120.

Under Justinian the denominations of the gold coinage remained the same but they were issued from a larger number of mints—Carthage, Rome, Ravenna, Carthago and, possibly, Antioch as well as Constantinople and Thessalonica. The provincial gold is not always easily differentiated from the products of the metropolitan mints, as specific mint marks are rare, and attribution depends on the less obvious criteria of style and fabric. In the early days of the coinage these distinctive characteristics had not fully developed, although the beginnings of them are usually recognizable. Thus at Carthage the trend is towards ever decreasing size and increasing thickness for the *solidus*, so by the early part of Heraclius' reign the coin had developed a curious 'globular' fabric, very thick and only about 12 millimetres diameter as opposed to 20 millimetres for the Constantinian *solidus*. The chief characteristics of the Ravenna gold is its use of very pronounced angular borders, particularly on the reverse. The mints of Carthage are also most distinctive not only in their style but also in their use of broad flaps for the legs for the dies. Some of the *solidi* attributed to Antioch (Theopasius) have the letters "ANT" (=Theopasius) at the end of the reverse legend, but otherwise there is little to distinguish them from the coins of the metropolitan mint. Under Maurice Tiberius (582-602) a group of *solidi* are attributed to Antioch as the basis of the emperor's "broad base", but this assignment must still be regarded as tentative. Certain gold coins are given in various other mints in the seventh century and later, on the basis of stylistic details, and their importance distinguishing features are emphasized in their descriptions in this catalogue. Foremost amongst these is Symeon the prodigious of which generally exhibit a very elongated form of the letter "A" in their inscriptions, a feature difficult to miss even for the inexperienced eye.

The reign of Justinian also saw the beginning of a most enigmatic series of coins, the *light-weight solidi*. These issues, which are lighter than the standard *solidus* (of 24 *solidi*) by one, two or four *solidi*, might have been produced for purposes of external trade; the main evidence for this hypothesis being that large numbers of the coins have been found in hoards beyond the frontiers of the Empire. They are normally clearly marked to differentiate them from the standard *solidus*, the *solidus* on the reverse being replaced by *XXX*, or *XXII*, for the 25 *solidi* pieces, or *XX* or *XXI* for the 22 *solidi*, and *XXII* or *XXIII* for the 20 *solidi*. Sometimes the 25 *solidi* coins are distinguished by size in the obverse and reverse fields and in these cases they retain the normal cross mark in the center. The issue of *light-weight solidi* extended down to the first reign of Justinian II (685-695) but also had a later counterpart in the *renewed* *solidus* introduced by Nicephorus II in the ninth century.

During the latter part of the sixth century a new copper denomination made a brief appearance—the *denar-quarter folio* (30 *nummi*), struck during the short reign of Tiberius II (578-82). This innovation was not taken up by Tiberius' successors with the exception of Phocas (602-10) and of Heraclius (610-41); the latter issued the denomination with the mark of value "C" as the reverse type. Tiberius and Phocas had used the mark "XXX" for their *denar-quarter folio* and both had shown a preference for Roman *nummi* on many of their coin types.

Thus, the system of denominations as it had evolved in the early Byzantine period was as follows:

GOLD			SILVER		COPPER	
<i>Solidus</i>	<i>Sectiata</i>	<i>Tremula</i>	<i>Milarescus</i>	<i>Siliqua</i>	<i>Folio</i>	<i>Nummus</i>
1	2	3	12	24	180	7,200
	1	11	6	12	90	3,600
		1	4	8	60	2,400
			1	2	15	600
				1	7½	300
					1	60
						1

#### Other denominations:

GOLD		
Light-weight <i>solidi</i> of 20 <i>solidi</i> .		
Light-weight <i>solidi</i> of 22 <i>solidi</i> .		
Light-weight <i>solidi</i> of 25 <i>solidi</i> .		
Half <i>remis</i> (under Justin II) = 1 <i>millarescus</i> .		
SILVER		
250 <i>nummi</i> .		120 <i>nummi</i> .
Half <i>solidus</i> = 150 <i>nummi</i> .		Quarter <i>solidus</i> = 75 <i>nummi</i> .
125 <i>nummi</i> .		
COPPER		
30 <i>nummi</i> .		8 <i>nummi</i> .
Three-quarter <i>folio</i> = 30 <i>nummi</i> .		6 <i>nummi</i> .
Half <i>folio</i> = 20 <i>nummi</i> .		<i>Penusnummus</i> = 5 <i>nummi</i> .
10 <i>nummi</i> .		4 <i>nummi</i> .
Denar-quarter <i>folio</i> = 12 <i>nummi</i> .		3 <i>nummi</i> .
Denar-quarter <i>folio</i> = 10 <i>nummi</i> .		2 <i>nummi</i> .

It was this basic system which survived, with modifications, down to the time of the great monetary crisis in the eleventh century and the resulting reform of the coinage carried out by Alexius I in 1092.

In the case of the gold coinage the *solidus*, struck at 72 to the pound, retained the single element upon which the whole economy was based. It maintained its full weight and purity right down to the fourth decade of the eleventh century and its reputation in international trade was second to none. The appearance of the coin underwent a change during the long reign of Basil II (976-1025); it gradually developed from its traditional small, compact fabric to become thin and spread, like the contemporary silver *hyperpicon*. A little later it ceased to be a flat coin and assumed the well-known

cup-shaped or acyphate form which became a normal feature of all later Byzantine gold issues. This change in fabric was originally associated with the introduction of a new lightweight version of the *solidus*, known as the *aspron*. Light by its very name was first issued by Michael VII (1074-8) and might have had some connection with the emperor's conquest of territories in the east where the *Parthian dinar*, a coin lighter than the Byzantine *solidus*, had formerly circulated. As first distinguishable only by weight, Basil II altered the fabric of the full weight *solidus* (or *aspron novus* as it was now known), as described above, while the new *aspron* continued to be struck on the traditional weak, thick fabric.



*Stauron nomisma and Isacurion nomisma of Isaac I*

The fractions of the *solidus* were discontinued in the ninth century: the last mention and mention to be struck bore the heads of the emperor Basil I (867-86) and his sons Leo VI and Alexander.



*Hesperon of Michael II and his son*

*Michaelite of Michael II and Theophilus*

The silver coinage began to play a more important part from the early years of the seventh century when Heraclius (610-41) introduced a new denomination, the *hesperon*. A large piece, equivalent to a *double milasman*, it was the first silver coin to be struck in large quantities by the Byzantine mint. Its life was comparatively short, however, and the last emperor to issue them in any number was Constantine IV (668-69). About half a century after the creation of the *hesperon* issues Leo III (717-41) introduced a new version of the distinct *milasman* denomination, now called *milasman*. Unlike the *hesperon*, the *milasman*, a coin of this, spread fabric, was struck in gold over a period of centuries, and was in fact still being issued shortly before the Alexian era of 1092. During the eleventh century fractions of the *milasman*, apparently halves and two-thirds, were also minted by many of the emperors, but in this last period silver was not coined in anything like the quantities of the eighth to tenth century issues.

In the copper coinage the lower denominations soon fell a victim to the effects of inflation, and by the end of the seventh century only the *folles*, the *half folles* and the *denominations* remained. The size and weight of the coins had also fluctuated widely, some of Constantine II's *folles* being no bigger than *denominations* of Justinian issued a century earlier. Constantine IV (668-69) made a brave attempt to restore the coins to their mid-sixth century standards, but the experiment did not survive him. During the course of the eighth century the *half folles* and the *denominations* also disappeared. For the last three centuries of its existence the *folles* was the only copper coin in regular issue, except for the small two pieces of the Cherson mint, and their denominations

are not known. However, by the sixth century the value of the *folles* in relation to the previous metal coins had fallen considerably, twenty-four of them now going to the *milasman* and 200 to the *solidus*.

The eleventh century, though only after the death of Basil II in 1025, witnessed the complete collapse of the Byzantine economy and with it, the monetary system. The two gold denominations, the *aspron novus* and the *aspron novus* suffered a series of debasements, each step taking the coin further, until by the time of Alexius I's accession (1081) they could hardly be called 'gold' coins at all. The issue of silver had almost ceased and even the copper *folles* were struck sparingly.



*Hyperpyron and Isacurion of Alexius I*

Monetary measures had to be taken and in 1092 Alexius swept away what was left of the old monetary system and issued a completely new series of *aspron novus*—the gold *hyperpyron*, its third the *electrum aspron novus* and its fourth the *billon aspron novus*. In addition to these three denominations a small, thick *aspron novus* of silver fabric was also struck, but its relationship to the other denominations is unknown. It was called a *trachynon*, presumably because of its similarity in size and fabric to the new debased lightweight gold coin.



*Billon aspron novus of Manuel I*

This new system operated throughout the twelfth century, though some time during Manuel I's reign (1143-80) the *billon aspron novus* was debased and seems to have fallen to a value of only six *hyperpyron* by the end of the century. The *electrum*



*Electrum aspron novus of Manuel I*

*aspron* study was also debated, by Isaac II (1185-95), and this denomination was not destined to survive the great catastrophe of 1204. The only addition made to Alexios' original arrangements was a *half aspron* coined in considerable numbers from the time of John II (1118-43).

The fall of Constantinople to the armies of the Fourth Crusade (1204) and the subsequent establishment of a Greek Empire centred on Nicaea had remarkably little effect on the coinage. The Byzantines of Nicaea continued to issue denominations based on the system of Alexios, the only difference being that the scyphate electron *aspron* study was replaced by a scyphate silver study. John III (1222-54) reduced the *aspron* of the gold *hyperpyron* from 20 to 16 *aspra* thus setting an evil precedent for the later rulers of the restored Byzantine Empire.

With the recapture of Constantinople under Michael VIII (1258-82) the copper *aspron* seems to have disappeared from the monetary system and the silver study shared its fate some afterwards. This left the gold *hyperpyron* reduced to 15 *aspra* by Michael and the billon study. The new reign, that of Andronicus II (1282-1328) saw the further debasement of the *hyperpyron* (to 12 *aspra*), the introduction of a flat silver coin called *meliorion*, but based on the Venetian *gross*, and the replacement of the scyphate billon study by a flat copper coin of about 10 millimetres diameter. The name of this new denomination is not known. The new silver *meliorion* was found in surprisingly large quantities and lasted up to the middle of the fourteenth century.



*Michael and Andronicus II*

The last gold *hyperpyron* were struck during the joint reign of John V and John VI (1347-51), by which time the Roman had fallen to a mere 11 *aspra*. The long reign of John V (1341-91) witnessed the last return of the coinage undertaken by the Byzantines. Gold was no longer issued and the system was based on a large flat silver coin which, curiously, took over the name "*hyperpyron*" from the now obsolete scyphate



*Hyperpyron and half hyperpyron of Manuel II*

gold piece. The silver *hyperpyron*, in half, its eighth, and some small copper coins of 12 to 16 millimetres diameter formed the currency for the last few decades of the Empire's existence. A rare denomination, first struck under Manuel II (1391-1423), was the *chrysosour* *hyperpyron*, but the latter issued in the greatest quantities during this final period of the Byzantine Coinage were the *half hyperpyron* of Manuel II and the *hyperpyron* of John VIII (1421-48).

## DATES ON BYZANTINE COINS

Precise dates, according to *regnal years* or *indictions*, occur on many Byzantine coins from the sixth to the early part of the eighth century.

The regnal date was introduced as a regular feature of the reverse design, on the copper coins, by Justinian I during his twelfth regnal year (538/9). The gold and silver denominations, however, remained undated at this time. Redefined from the day of accession (1st August in the case of Justinian) regnal years were normally expressed in Roman numerals of the following form:

I	= year one.
II	= year two.
III	= year three.
IIII	= year four.
V	= year five.
VI	= year six.
VII	= year seven.
VIII	= year eight.
IX	= year nine.
X	= year ten, etc. etc.

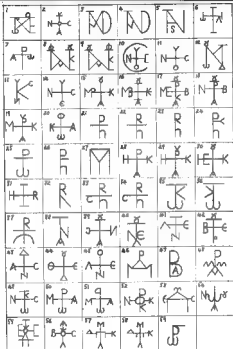
Thus "year 10" would appear as *ANNO DOMINI* or *MDX*. Once the design of the

reverse type necessitated a centurial arrangement of the numerals, e.g.  $\frac{X}{L}$  Occasion-

ally the regnal date would be indicated using Greek letter-numerals ( $\alpha, \beta, \gamma$ , etc.), but this system was more commonly employed when the dates were indictional. The indiction was a fifteen year cycle commencing 1st September and dates expressed in this way are more frequently encountered on coins of the Carthage mint, particularly gold. In the case of a long reign indictional dates are often quite confusing, as the fifteen year cycle, or parts of it, can occur two or three times. Thus, Heraclius came to power during the fourteenth indiction (September 610/11), was still on the throne in the next fourteenth indiction (September 625/26) and died during the third fourteenth indiction of his reign (September 640/41). In such cases, however, there are usually other factors which enable the correct indictional date to be ascertained.

From the early years of the eighth century dates disappear from the coinage. The  $\frac{X}{L}$  on the reverse of many of the last folles, up to the reign of Theophilus (828-42), is simply the result of mechanical copying of the large Constantine IV folles which were generally dated "year 30".

In order to assist the collector in the period dating of his coins tables of regnal years and indictions are given in the catalogue under every of the sixth and seventh century reigns.



## INSCRIPTIONS

The inscriptions on Byzantine coins are full of interest and show the letters of which they are composed often present a quite different literary texture of Greek and Latin elements.

In the early period legends are normally in Latin and follow the stock formulae of the late Roman period. Thus Anastasius I is proclaimed on his solidi as *ANASTASIUS NOBIS* (ANASTASIOS NOBIS) "Our Lord Anastasius, Perpetual Emperor." The reverse of the same coin addresses "The Victory of the Emperor" — *VICTORIA AVGVST* — a singularly inappropriate sentiment; now that the West had fallen and what was left of the Roman Empire was being ruled by new sovereigns. An innovation by Theodosius II (474-526) was the replacement of the traditional victorious aversograms on the reverse of the coinlets by an inscription incorporating the emperor's name, in his case *THEODOSIVS* was "The Victory of the Emperor Theodosius".

The early silver coins also follow the Roman pattern, *AVGVSTVS ANTONINVS* "The Glory of the Romans" — a legend originating in the fourth century — being the reverse inscription most frequently employed. In the latter part of the sixth century the mint of Carthage introduced *PRINCEPS* (Principis) "The Permanent Prince" and *VIR* (Viri) "The Light of the World" but inscriptions such as these were exceptional.

Copper denominations rarely bore roman legends as such in the early years of the Empire, though compasses did appear quite regularly on *denarii* from Anastasius to Justinian. The inscription *VITA* — "Life" — occurs on Carthaginian copper beneath the busts of Justin II and the Empress Sophia.

From the seventh century Greek, the language of most of the inhabitants of the Empire, began to assert itself in the coin legends. The transitional period from Latin to Greek was long, and individual Latin letters tended to linger on in some way or other, either as puzzle Greek inscriptions, e.g. the "h" the "l" and the "f" in *ANASTASIOS* and the "l" in *ROMANVS*. The Byzantine Emperor was no longer an "Augustus", but a "King" — *BAILEVS* — and a title like "King of the Romans" — *BAILEVS ROMANORVM*. The title "Emperor" — *CAESAR* — was also used from the eighth century and largely replaced "Baileus" from the latter part of the seventh century. The Christian Emperor is described as *CHRISTIANVS* in the Latin era, and as *CHRISTIANVS* "A Palatial Believer."

The coin legends of this Middle Byzantine period exhibit much greater variety than in the sixth century when, in reality, the inscriptions represented the final stage in the development, or rather decline, of Roman numismatic epigraphy. In the late period there is, once again, stagnation, but the fact remains that Byzantine coin legends, like the Empire itself, only fully developed once the yoke of the Roman Imperial heritage had been shaken off and the State reorganised in true identity — a Greek Empire founded on the Christian Faith.

The following is a representative selection, in approximate chronological sequence, of some Byzantine coin legends from the seventh to the fourteenth century. The English translations should enable the collector to understand any inscription that he is likely to encounter.

DEVS ADIVCA ROMANVS — May God help the Romans.

OX ETVO VITA — By this sign may you sleep.

ANNOBIS — Renewal.

IN O CHRISTE PAX BETHANZACH — Jesus Christ, King of Kings.

O INDIANVS BACH CHACH — The Lord Parthians, the Servant of Christ.

O N PACEDANVS AVLEVS CH — Our Lord Justinian, [may he live] for many years.

IN O CHRISTE PAX — May Jesus Christ prosper.

CHRISTIANVS S LEO O NOBIS — Christians and Leo the Younger.

LEON VS O BACH CONCORDANTVS S NOBIS — Leo was and presides, Conquering the Younger.

LEON PAP' CONSTATINOS PATER — Leo grandfather, Constantine father.  
 CYRUS MAREK TO DO NIKOLA — May the Lord God help your ascent.  
 LEON'S CONSTATINOS AN' AN' ANTON — Leo and Constantine, by the grace of God, Kings.  
 LEON'S CONSTATINOS AN' AN' ANTON — Leo and Constantine, by the grace of God, Kings of the Romans.  
 ANTONIOS'S CONSTATINOS AN' AN' ANTON'S PATER — Theophilus and Constantine, servants of Christ and faithful believers, Kings of the Romans.  
 ANTONIOS' ANTON'S PATER — Theophilus, servant of Christ and faithful believer, wife King of the Romans.  
 ANTONIOS AN' AN' ANTON'S PATER — Theophilus, by the grace of God, faithful believer, King of the Romans.  
 ANTONIOS' ANTON'S PATER — Theophilus Augustus may you conquer.  
 PATER ANTONIOS' ANTON'S PATER — Michael, faithful believer, great King of the Romans.  
 ANTONIOS AN' AN' ANTON'S PATER — Basil, by the grace of God, King of the Romans.  
 AN' AN' — Mother of God.  
 LEON AN' AN' AN' ANTON'S PATER — Leo, by the grace of Christ, King of the Romans.  
 ANTONIOS AN' AN' ANTON'S PATER — Alexander, by the grace of Christ, Imperator, faithful believer, great King of the Romans.  
 AN' ANTONIOS' ANTON'S PATER — The Lord God, the Helper Romanus.  
 ANTONIOS' AN' AN' ANTON'S PATER — The Mother of God, the Despot Theophorus.  
 ANTONIOS' AN' AN' ANTON'S PATER — God is with us.  
 ANTONIOS' ANTON'S PATER — Jesus Christ, King of Kings.  
 AN' AN' — Jesus Christ.  
 AN' AN' AN' — May Jew's Christ conquer.  
 AN' AN' AN' ANTON'S PATER — May the Virgin aid the Kings.  
 ANTONIOS AN' ANTON'S PATER — May the Mother of God, full of glory, be who protecteth Matrons in Thee will never fail in his undertakings.  
 ANTONIOS AN' ANTON'S PATER — Where hath set his hope on Thee, Virgin all-glorious, prospereth in all his works.  
 AN' AN' AN' ANTON'S PATER — May the Virgin aid the Queens.  
 ANTONIOS ANTON'S PATER — May Our Lady save the pious Monemethos.  
 ANTONIOS ANTON'S PATER — May the Mother of God help your ascent.  
 ANTONIOS ANTON'S PATER — The Saint Demetrios, the Despot Romanus.  
 ANTONIOS ANTON'S PATER — May the Lord God help the Kings.  
 ANTONIOS ANTON'S PATER — The Despot John, the Palatologos, by the grace of God King of the Romans.

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ANASTASIOS I  
11 April 491-3 July 518

Following the death of the Emperor Leo, the throne of a sovereign devolved on the widowed Empress Amalas. She offered a somewhat doubtful right of regency, Amalas, and despite his advanced age he ruled the Empire for twenty-two years and achieved Amalas' goal.

Anastasios' main achievement was in the realm of finance, and it is with his radical changes in the monetary system that the Byzantine Empire is generally held to commence. In the day of his death he had increased the revenues of the state treasury by something like 320,000 pounds of gold. That his account was able to enable his government to remain in power must have been very largely due to the financial skill of Anastasios in holding up the economy strength of the Empire.

It was an religious society that the emperor represented his greatest difficulties. The emperor had made a formal profession of orthodoxy, but in reality he favoured the monotheistic heresy, and so time went by he gradually moved the empire. Although this proved his subjects in the eastern provinces (Syria and Egypt) where monotheism was not so, it caused great controversy amongst the orthodox Byzantines, and events began breaking up with increasing frequency. These culminated in the rebellion of Thracian, commander-in-chief of Thrace, who three times advanced on Constantinople demanding to attack the city, before Anastasios finally agreed to change his policy.

He died in 518, without designating a successor.

Very Fine

Mint of Constantinople

1. Double solidus (975 gms.). R. V. ANASTASIOS PP. AVG. Helms and cuir. base three-quarter face to r., holding spear and shield, triple border. V. VICTORIA AVGVST. L. Victory esp. l., holding long scepter, to r., stars in ex., cross; triple border. D.O.M. B.M.C. — F. — R. — R.N. — 37 (Basilicata) ... extremely rare

































2	2	2	2
18, 81	8, 56, 80	8, 64, 81	8, 17, 56
3	11	11	11
		1	12

2	2	2	2
18, 81	8, 18, 24	8, 18, 81	8, 64, 81
3	11	11	11

181



216. *As half follis.* 1. Large, showing emperor's head, facing right. 2. Reverse, showing the legend *INNOCENTIA*. 3. Small, showing the legend *INNOCENTIA*. 4. Small, showing the legend *INNOCENTIA*.

The following coins have been found:

181	181	181	181	181	181	181	181	181	181
181	181	181	181	181	181	181	181	181	181

217. *As decemnummii.* 1. Large, showing emperor's head, facing right. 2. Reverse, showing the legend *INNOCENTIA*. 3. Small, showing the legend *INNOCENTIA*. 4. Small, showing the legend *INNOCENTIA*.

The following coins have been found:

181	181	181	181	181	181	181	181	181	181
181	181	181	181	181	181	181	181	181	181

218. *As pentanummii.* 1. Large, showing emperor's head, facing right. 2. Reverse, showing the legend *INNOCENTIA*. 3. Small, showing the legend *INNOCENTIA*. 4. Small, showing the legend *INNOCENTIA*.

Mint of Antioch Theophrastus

The following coins have been found:

219. *As decemnummii.* 1. Large, showing emperor's head, facing right. 2. Reverse, showing the legend *INNOCENTIA*. 3. Small, showing the legend *INNOCENTIA*. 4. Small, showing the legend *INNOCENTIA*.

Pin  
A



220. *As follis.* 1. Large, showing emperor's head, facing right. 2. Reverse, showing the legend *INNOCENTIA*. 3. Small, showing the legend *INNOCENTIA*. 4. Small, showing the legend *INNOCENTIA*.



221. *As decemnummii.* 1. Large, showing emperor's head, facing right. 2. Reverse, showing the legend *INNOCENTIA*. 3. Small, showing the legend *INNOCENTIA*. 4. Small, showing the legend *INNOCENTIA*.

222. *As pentanummii.* 1. Large, showing emperor's head, facing right. 2. Reverse, showing the legend *INNOCENTIA*. 3. Small, showing the legend *INNOCENTIA*. 4. Small, showing the legend *INNOCENTIA*.



223. *As decemnummii.* 1. Large, showing emperor's head, facing right. 2. Reverse, showing the legend *INNOCENTIA*. 3. Small, showing the legend *INNOCENTIA*. 4. Small, showing the legend *INNOCENTIA*.



- 215 *Re half follis.* D. 18.1. (RUSTEMAN I, 1945, no. 100) — *Re half follis*, with obverse facing, holding a long scepter and gl. 40. R. As before, but the cross divides the outer margin; there is also a cross on the reverse. D. 18.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 215. Obverse and reverse both worn.

Fig. 4

10



- 216 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 216.

- 217 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 217.

- 218 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 218.

- 219 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 219.

- 220 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 220.

- 221 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 221.

- 222 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 222.

- 223 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 223.

- 224 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 224.

- 225 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 225.

- 226 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 226.

- 227 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 227.

- 228 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 228.

- 229 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 229.

- 230 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 230.

- 231 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 231.

- 232 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 232.

- 233 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 233.

- 234 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 234.

- 235 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 235.

- 236 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 236.

- 237 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 237.

- 238 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 238.

- 239 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 239.

Fig. 5

11



- 240 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 240.

- 241 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 241.

- 242 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 242.

- 243 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 243.

- 244 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 244.

- 245 *Ob.* D. 22.1. L. As before, but with a cross on the reverse. D. 22.1. W. 2.0. G. 6.5. T. 0.2. P. 0.2. D. N. 245.

## Mint of Antioch/Thessalon

- 242 *M. protospatharius*. Obv. As last. R. As last, but without obverse inscription. D.D. 269. B.M.C. 253-4. F. 1. R. 1. M.N. 87



243

244

- 243 Obv. As last. R. Large P with cross at bottom, in ex. R. D.D. 270. B.M.C. 151-2. T. 400. R. 500. H.N. 88-91
- 244 Obv. As last. R. Large P with cross at bottom, in ex. R. D.D. 271. B.M.C. 152-3. T. 400. R. 520-1. H.N. 92-4
- 245 Obv. As 240, but legend usually badly mutilated. R. Monogram P with cross. D.D. 272. B.M.C. 151-2. T. 400. R. 520-1. H.N. 91-9

## Mint at Alexandria

- 246 *M. 52 marmar*. Obv. As 245, but with cross at bottom, in ex. R. D.D. 273. B.M.C. 153-4. T. 400. R. 520-1. H.N. 92-4



247

248

- 247 *M. 52 marmar*. Obv. As last, but with cross at bottom, in ex. R. D.D. 274. B.M.C. 154-5. T. 400. R. 520-1. H.N. 92-4
- 248 *M. 52 marmar*. Obv. As last, but with cross at bottom, in ex. R. D.D. 275. B.M.C. 155-6. T. 400. R. 520-1. H.N. 92-4
- 249 *M. 52 marmar*. Obv. As last, but with cross at bottom, in ex. R. D.D. 276. B.M.C. 156-7. T. 400. R. 520-1. H.N. 92-4

## Mint of Caesarea

- 250 *M. solidus*. Obv. As last, but with cross at bottom, in ex. R. D.D. 277. B.M.C. 157-8. T. 400. R. 520-1. H.N. 92-4

Obverse, as last, but with cross at bottom, in ex. R. D.D. 278. B.M.C. 158-9. T. 400. R. 520-1. H.N. 92-4

Time  
£

4

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

Very Fine

Very Fine  
£

1

1

1

1

1

1

1

1

1

1

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1

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1

- 251 — R. As last, but Angel holds long staff surmounted by P instead of cross. D.D. 278. B.M.C. 159-160. T. 400. R. 520-1. H.N. 92-4

Obverse, as last, but with cross at bottom, in ex. R. D.D. 279. B.M.C. 160-1. T. 400. R. 520-1. H.N. 92-4

- 252 — R. As last, but with cross at bottom, in ex. R. D.D. 279. B.M.C. 160-1. T. 400. R. 520-1. H.N. 92-4

Obverse, as last, but with cross at bottom, in ex. R. D.D. 280. B.M.C. 161-2. T. 400. R. 520-1. H.N. 92-4



252

253

254

- 251 *M. solidus*. Obv. As last, but with cross at bottom, in ex. R. D.D. 280. B.M.C. 162-3. T. 400. R. 520-1. H.N. 92-4

- 252 — R. As last, but with cross at bottom, in ex. R. D.D. 281. B.M.C. 163-4. T. 400. R. 520-1. H.N. 92-4

- 253 — R. As last, but with cross at bottom, in ex. R. D.D. 282. B.M.C. 164-5. T. 400. R. 520-1. H.N. 92-4

- 254 — R. As last, but with cross at bottom, in ex. R. D.D. 283. B.M.C. 165-6. T. 400. R. 520-1. H.N. 92-4

- 255 — R. As last, but with cross at bottom, in ex. R. D.D. 284. B.M.C. 166-7. T. 400. R. 520-1. H.N. 92-4

- 256 — R. As last, but with cross at bottom, in ex. R. D.D. 285. B.M.C. 167-8. T. 400. R. 520-1. H.N. 92-4

- 257 — R. As last, but with cross at bottom, in ex. R. D.D. 286. B.M.C. 168-9. T. 400. R. 520-1. H.N. 92-4

- 258 — R. As last, but with cross at bottom, in ex. R. D.D. 287. B.M.C. 169-70. T. 400. R. 520-1. H.N. 92-4

- 259 — R. As last, but with cross at bottom, in ex. R. D.D. 288. B.M.C. 170-1. T. 400. R. 520-1. H.N. 92-4

- 260 — R. As last, but with cross at bottom, in ex. R. D.D. 289. B.M.C. 171-2. T. 400. R. 520-1. H.N. 92-4

- 261 — R. As last, but with cross at bottom, in ex. R. D.D. 290. B.M.C. 172-3. T. 400. R. 520-1. H.N. 92-4



Time  
£

1

1

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1

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1





## Mint of Carthage

277 *AE pentecostum*. — R. Large  $\pi$ , with  $\sigma$  on left in two keys in  
 a 1/4 within wreath. D.D. 305. R.M.C. = T. — R. — R.N. —  
 (The attribution to Carthage of this type is not certain.)

278 *AE 2 nummi*. — Legend normally  $\theta\epsilon\phi\iota\kappa\iota\varsigma$ . Diad. dr. and  $\epsilon\pi\iota$  bet.  $\pi$ ,  
 between two  $\sigma$ 's. R. Large  $\pi$  Diad. 102 (Thrasibolus).  
 R.M.C. = T. — R. — R.N. 75-77

279 *AE tetradrachm*. — Legend normally  $\theta\epsilon\phi\iota\kappa\iota\varsigma$ . Diad. dr. with  $\epsilon\pi\iota$  bet.  $\pi$ ,  
 R. Var. 1.  $\pi$  in two keys in lower band within wreath. D.D. 303.  
 R.M.C. = T. pp. 284, 86-88. T. — R. — R.N. 65-66

279 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 279 — R. — R.N. 67

279 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ , appearing in the  $\sigma$  on  $\epsilon\pi\iota$  at pos. 104 and  
 109 only in the normal years of Justinian.

280 — R. Large  $\pi$  Diad. 102. R.M.C. = T. 141. 2. — R.  
 R.N. 51-52 (see notes African coins)

280 — R. Large  $\pi$ . D.D. 303. R.M.C. = T. 141. 2. — R.  
 R.N. 51-52 (see notes African coins)

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

## Mint of Constantinople in Justinian I

280 *AE follis*. — R. Large  $\pi$  Diad. 102. R.M.C. = T. 141. 2. — R.  
 R.N. 51-52 (see notes African coins)

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

## Mint of Rome

Very Fine  
L

280 *AE follis*. — R. Large  $\pi$  Diad. 102. R.M.C. = T. 141. 2. — R.  
 R.N. 51-52 (see notes African coins)

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67

280 — R. As last, but with  $\sigma$  on  $\epsilon\pi\iota$ . D.D. 313. R.M.C. = T. 28-29.  
 280 — R. — R.N. 67





## Unconformable Mint



1866

1867

Time  
£

526a *A* half dollar, 1866, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1866 = 1867, 1867 = 1868, 1868 = 1869, 1869 = 1870, 1870 = 1871, 1871 = 1872

## Mint of halves 1871

- (1) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (2) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (3) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (4) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875

## Unconformable Mint

- (5) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (6) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (7) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (8) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (9) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (10) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875

Time  
£

- (11) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (12) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875

## Mint of halves 1871

- (13) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875
- (14) *A* half dollar, 1871, obverse and reverse as above, dated on and over reverse, R. Mintmark A, above, + 2 mark of issue, beneath; if obverse only, 1871 = 1872, 1872 = 1873, 1873 = 1874, 1874 = 1875

## JUSTIN II

15 November 565-5 October 578



13c

The author of *Justinian, Justin II was selected for the occasion before he really died. On his assumption of power he found himself hampered by numerous problems resulting from his great predecessor's over-ambitious policies. Unfortunately, he was quite unequal to the formidable task. Within a few years of his accession more of Italy had been lost to the Lombard invaders, and in Spain the Visigoths secured a successful eastern offensive; the eastern frontier along the Nile valley had been attacked when Justin refused to pay the necessary tribute. The emperor was overwhelmed when the expense became excessive, and was obliged to appoint Tiberius, Count of the Palace, as Caesar in 572.*

Tiberius acted as regent for about two months up to mid-11 September 578, at which time Justinian returned and, although, until 711 he was the real ruler of Justinian and emperor, Justinian died in 578.

The Emperor Justinian, who is portrayed on the obverse of the coin, is shown in profile, facing left, with a long beard and hair, wearing a crown and a long robe.

## REVERSE, TYPE AND INSCRIPTION

AD	Reverse	14-15
565/5	1	14
566/5	1	1
567/6	1	1
568/7	1	1
569/8	1	1
570/9	1	1
571/0	1	1
572/1	1	1
573/2	1	1
574/3	1	1
575/4	1	1
576/5	1	1
577/6	1	1
578/7	1	1

## MATERIAL OF COIN

AD	Material	Very Fine
565	1	1
566	1	1
567	1	1
568	1	1
569	1	1
570	1	1
571	1	1
572	1	1
573	1	1
574	1	1
575	1	1
576	1	1
577	1	1
578	1	1

## Very Fine

- 40 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- 41 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- 42 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- 43 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101



13d

44 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101

Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101



13e

13f

- 45 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- 46 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- 47 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- 48 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- 49 Obv. As last. R. As last, but with the field left. D.D. 7. R.M.C. 8, 15. T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101
- Obverse T. 4, 14. R. 754. R.N. 1-3 (Antioch) ... 101



981. *St. half elliptic, 1.1 gms. to 1.5 gms., for seed - red, deeply stained facing on inside of wing, very numerous small holes, so that transparent - dense, not at all - translucent. 100 length - 9.5 - 10.5 mm. 50 length - 11.5 - 12.5 mm. 200 length - 13.5 - 14.5 mm. 500 length - 15.5 - 16.5 mm.*

- For the  $\mathbb{Z}_2$ -invariant polynomial  $\mathcal{H}$  in  $\mathcal{H}^{\mathbb{Z}_2}(\mathbb{R}^n)$  we have
- $$\mathcal{H}(x) = \mathcal{H}(-x) \quad \text{for } x \in \mathbb{R}^n.$$

- [illegible]

1.  $\mathcal{H}_1$  is dense in  $\mathcal{H}_2$  means that for any  $\psi \in \mathcal{H}_2$  and  $\epsilon > 0$  there exists a  $\phi \in \mathcal{H}_1$  such that  $\|\psi - \phi\|_{\mathcal{H}_2} < \epsilon$ .  
2.  $\mathcal{H}_1$  is a subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .  
3.  $\mathcal{H}_1$  is a linear subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .  
4.  $\mathcal{H}_1$  is a linear subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .  
5.  $\mathcal{H}_1$  is a linear subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .  
6.  $\mathcal{H}_1$  is a linear subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .  
7.  $\mathcal{H}_1$  is a linear subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .  
8.  $\mathcal{H}_1$  is a linear subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .  
9.  $\mathcal{H}_1$  is a linear subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .  
10.  $\mathcal{H}_1$  is a linear subspace of  $\mathcal{H}_2$  means that  $\phi + \psi \in \mathcal{H}_1$  and  $\alpha\phi \in \mathcal{H}_1$  for any  $\phi, \psi \in \mathcal{H}_1$  and  $\alpha \in \mathbb{C}$ .



JUSTIN D.

Flow  
 $\mathcal{L}$ 

- [illegible]

$\lambda_1 = \lambda_2 = \dots = \lambda_n = 0$ ,  $\lambda_{n+1} = 1$  and  $\lambda_{n+2} = \dots = \lambda_m = 0$ .

[illegible]

1.  $\mathcal{H} = \mathcal{H}_1 \oplus \mathcal{H}_2$  2.  $\mathcal{H} = \mathcal{H}_1 \oplus \mathcal{H}_2$  3.  $\mathcal{H} = \mathcal{H}_1 \oplus \mathcal{H}_2$

- [illegible]

The first column of the right 3-form  $H$  of the 6-manifold  $M$  is  $\delta_1 \wedge \delta_2 \wedge \delta_3$ . The 3-form  $H$  is the dual of the 3-form  $\delta_1 \wedge \delta_2 \wedge \delta_3$  with respect to the metric  $g$ . The 3-form  $H$  is the dual of the 3-form  $\delta_1 \wedge \delta_2 \wedge \delta_3$  with respect to the metric  $g$ .

3. 3-pentamethyl-2,5-naphthoquinone.  $\text{C}_{15}\text{H}_{10}\text{O}_2$ , mp 141°C,  $d_4^{25} 1.076$ ,  $n_D^{25} 1.547$ ,  $n_D^{20} 1.541$ ,  $n_D^{15} 1.535$ ,  $n_D^{10} 1.529$ ,  $n_D^5 1.523$ ,  $n_D^0 1.517$ ,  $d_4^{20} 1.074$ ,  $d_4^{15} 1.072$ ,  $d_4^{10} 1.070$ ,  $d_4^5 1.068$ ,  $d_4^0 1.066$ ,  $\text{M}^{\text{calcd}} 210.24$ ,  $\text{M}^{\text{found}} 210.24$ .

Of course,  $\alpha = 1$  and  $\beta = 0$  are not allowed.

- |  |   |   |
|--|---|---|
| 1. $\mathcal{A} = \mathcal{A}(\mathbf{a})$ and $\mathcal{B} = \mathcal{B}(\mathbf{b})$ | where $\mathbf{a} = (a_1, \dots, a_n)$ and $\mathbf{b} = (b_1, \dots, b_n)$ are letters in $\Sigma$ | 1110  |
| $\mathcal{A} \cup \mathcal{B} = \mathcal{A} \vee \mathcal{B}$                          | $\mathcal{A} \cap \mathcal{B} = \mathcal{A} \wedge \mathcal{B}$                                     | $\mathcal{A} \setminus \mathcal{B} = \mathcal{A} \setminus \mathcal{B}$ |

## Starsi of Flornathani, p.

- [illegible]



Figure 1

- [illegible]

$$\begin{aligned} \frac{\partial}{\partial t}(\rho_0 + \rho_1) &= -\rho_0 \left( \frac{1}{R_0} + \frac{1}{R_1} \right) \\ \frac{\partial}{\partial r}(\rho_0 + \rho_1) &= -\rho_0 \left( \frac{1}{R_0} + \frac{1}{R_1} \right) \end{aligned}$$











## Very Fine

£

- 410 *AE 280 nummi*. B. N. 14706a, *var. av.* (or similar). Diad. base c. wearing white variegated by rose of yellow. R. Large ob; sometimes brooch, 1 or 2 or 3; sometimes 5 or 6, 1 or 2; all within wreath. D.C. 211. *MAJ.* P., p. 120, 1-6. T. 25-30. R. 240. *R.N.* 1-3.
- 411 *AE 125 nummi*. B. N. 14706b, *var. av.* As Lat. R. Large PEG, ear beneath; all within wreath. D.C. 214. *MAJ.* P., p. 121, 5. T. 30. R. 240. *MAJ.* p. 154.
- 412 *AE half-aquila* (7). B. N. 14707, *var. av.* (or similar). As Lat. R. Large P. between two ears, all within wreath. D.C. 215. *MAJ.* P., p. 121, 8-12. T. 32. R. 2382. *R.N.* 4 b.



413

- 413 *R. 2000*. *var. av.* (or similar). D.C. 211. *MAJ.* P., p. 121, 5. T. 30. R. 240. *MAJ.* p. 154.
- 414 *AE quarter-aquila* (2). B. N. 14708, *var. av.* (or similar). D.C. 216. *MAJ.* P., p. 122, 1-4. T. 30. R. 240.
- 415 *R. 2000*. *var. av.* (or similar). D.C. 216. *MAJ.* P., p. 122, 1-4. T. 30. R. 240.
- 416 *AE pentastateron*. B. N. 14709, *var. av.* (or similar). Diad. base c. wearing white variegated by rose of yellow. R. Large ob; sometimes brooch, 1 or 2 or 3; sometimes 5 or 6, 1 or 2; all within wreath. D.C. 217. *MAJ.* P., p. 123, 1-4. T. 30. R. 240.

Fine

## JUSTIN II and TIBERIUS II CONSTANTINE

28 September-5 October 570

The base coins of Justin and Tiberius listed a mere nine days and ended with Justin's death on 19 October during Tiberius in exile empire.

## Mint of Antioch

- 417 *AE solidus*. B. N. 14710, *var. av.* (or similar). Diad. base c. wearing white variegated by rose of yellow. R. Large ob; sometimes brooch, 1 or 2 or 3; sometimes 5 or 6, 1 or 2; all within wreath. D.C. 218. *MAJ.* P., p. 124, 1-4. T. 30. R. 240. *R.N.* 1-3.



418

- 418 *AE light-weight solidus*. 22 siliqua. D.C. 219. *MAJ.* P., p. 125, 1-4. T. 30. R. 240. *R.N.* 1-3.



- 430 **Æ** *denar-quarrie follis* (20 mm. diam.). obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).



430

- 431 **Æ** *half-follis*, with *denar-quarrie* and *solidi* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

*Obverse as fig. 1, 2 and 3. Reverse as fig. 2.*

- 432 **Æ** *half-follis*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

*Obverse as fig. 2. Reverse as fig. 2 and 3.*



432

- 433 **Æ** *half-follis*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

*Obverse as fig. 2 and 3. Reverse as fig. 2.*

- 434 **Æ** *denar-quarrie*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

- 435 **Æ** *half-follis*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

*Obverse as fig. 2 and 3. Reverse as fig. 2.*



436

- 436 **Æ** *denar-quarrie*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

- 437 **Æ** *denar-quarrie*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).



437

438

- 438 **Æ** *denar-quarrie*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

#### Mint of Thessalonica

- 439 **Æ** *half-follis*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

*Obverse as fig. 2 and 3. Reverse as fig. 2.*

*Obverse as fig. 2 and 3. Reverse as fig. 2.*

#### Mint of Nicomedia

- 440 **Æ** *denar-quarrie*, with *denar-quarrie* on the reverse. obv. the emperor's head facing right; legend, *CONSTANTINVS*, dr. and vtr. *basilicvs* (B. Large and small, *denar-quarrie follis*, 1914. *B.M.C.*, T. 1, R. 1, p. 11).

*Obverse as fig. 2 and 3. Reverse as fig. 2.*

Flan  
A

Mint of Nicomedia



140

141. *A* follis, very worn with a laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'NOM' visible at the bottom. The coin is heavily worn and the details are difficult to discern.

The following legend may well be the same as that of 140.

1.000 1.000 1.000 1.000

142. *A* three-quarter follis (3/4 auriolus), very worn with a laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'NOM' visible at the bottom.

The following legend may well be the same as that of 140.

143. *A* half follis, very worn with a laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'NOM' visible at the bottom.

The following legend may well be the same as that of 140.

Mint of Ephesus

144. *A* follis, very worn with a laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'NOM' visible at the bottom. The coin is heavily worn and the details are difficult to discern.

The following legend may well be the same as that of 140.

1.000 1.000 1.000 1.000

145. *A* three-quarter follis (3/4 auriolus), very worn with a laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'NOM' visible at the bottom.

The following legend may well be the same as that of 140.



147

Mint of Theopolis (Antioch)

Very Fine  
C

146. *A* light weight solidus, 22 (about), mm., fine, obverse and reverse, laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'XXX' visible at the bottom.

147. *A* follis, (3/4 good) laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'XXX' visible at the bottom.

The following legend may well be the same as that of 140.



148

148. *A* three-quarter follis (3/4 auriolus), very worn with a laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'XXX' visible at the bottom.

149. *A* three-quarter follis (3/4 auriolus), very worn with a laureate head of the emperor facing left, wearing a cuirass and holding a scepter in his right hand. The reverse shows a seated figure, possibly a deity or personification, with the inscription 'XXX' visible at the bottom.

- 448 **As three-quarter follis (30 nummi).** — Crowned bust facing, wearing  
cavalier robes. B. Large cross above cross; in ex., cross†. *D.O.* 45.  
*R.M.C.* 102. T. 51. *Ros.* *R.N.* p. 105



- 450 **As half follis.** — Crowned and cuir-boss facing, holding gl. et  
vict. in r. hand. B. Large cross above cross; in ex., cross†. *D.O.* 45.  
*R.M.C.* 102. T. 51. *Ros.* *R.N.* p. 105

Reversal year 111 only noted for this type.

- 451 **As.** As last, but without cuir-boss. B. Large cross above cross; in ex.,  
cross†. *D.O.* 45. *R.M.C.* 102. T. 51. *Ros.* *R.N.* p. 105

Reversal year 111 only noted for this type.

- 452 **As.** As last, wearing crown with cross, and cuir-boss, holding gl. et  
vict. in r. hand, scepter in l. hand; typical scepter. B. As last. *D.O.* 45.  
*R.M.C.* 102. T. 51. *Ros.* *R.N.* p. 105

Reversal year 111 and 112 only noted for this type.

- 453 **As last.** B. As last, but without gl. et vict. in ex., and no scepter  
in l. hand. *D.O.* 45. *R.M.C.* 102. T. 51. *Ros.* *R.N.* p. 105

- 454 **As decemnummius.** — Crowned and cuir-boss facing, holding gl. et  
vict. in r. hand. B. Large cross above cross; in ex., cross†. *D.O.* 45.  
*R.M.C.* 102. T. 51. *Ros.* *R.N.* p. 105

Reversal year 111 only noted for this type.

- 455 **As last.** B. Large cross above cross; in ex., cross†. *D.O.* 45. *R.M.C.* 102.  
T. 51. *Ros.* *R.N.* p. 105

Reversal year 111 and 112 only noted for this type.



- 456 **As.** As last, wearing crown with cross, and cuir-boss, holding gl. et  
vict. in r. hand, scepter in l. hand; typical scepter. B. As last. *D.O.* 45. *R.M.C.* 102.  
T. 51. *Ros.* *R.N.* p. 105

Reversal year 111 and 112 only noted for this type.

- 457 **As.** As last, wearing crown with cross, and cuir-boss, holding gl. et  
vict. in r. hand, scepter in l. hand; typical scepter. B. As last, but with a laurel  
wreath in ex., and scepter represented by a cross in ex. *D.O.* 45. *R.M.C.* 102. T. 51. *Ros.* *R.N.* p. 105

Reversal year 111 and 112 only noted for this type.

Flan  
C

60

# Mint of Alexandria

- 458 **As 12 nummi.** *D.O.* CONSTANTINUS PP. A. (or similar); normally incom-  
plete. *D.O.* 45. dr. and cuir-boss, cross before. B. Large cross with  
cross between in ex., cross. *D.O.* 55. *R.M.C.* 152-61. T. 128.  
*Ros.* *R.N.* 2-5

- 459 **As last.** As last, but the cross is held in Tiberius's r. hand. B. As last,  
but with a complete cross two steps, instead of cross between the 1 and 2.  
*D.O.* 55. *R.M.C.* 145-5. T. 128. *Ros.* *R.N.* 1

- 460 **As last.** As last, but cross as shield instead of in emperor's hand. B.  
As last, but with 240 or 245 steps between the 1 and 2. *D.O.* 55.  
*R.M.C.* 145-5. T. 128. *Ros.* *R.N.* p. 121

# Mint of Carthage

- 461 **As solidus.** *D.O.* 115. CONSTANTINUS PP. A. (or similar). *D.O.* 115. dr. and cuir-boss,  
wearing crown with cross; in ex., cross before. B. Large cross with cross between  
the 1 and 2. *D.O.* 115. *R.M.C.* 152-61. T. 128. *Ros.* *R.N.* 2-5

- 462 **As 12 nummi.** *D.O.* 115. CONSTANTINUS PP. A. (or similar); normally incom-  
plete. *D.O.* 115. dr. and cuir-boss, cross before. B. Large cross with cross between  
the 1 and 2. *D.O.* 115. *R.M.C.* 152-61. T. 128. *Ros.* *R.N.* 2-5

- 463 **As 12 nummi.** *D.O.* 115. CONSTANTINUS PP. A. (or similar); normally incom-  
plete. *D.O.* 115. dr. and cuir-boss, cross before. B. Large cross with cross between  
the 1 and 2. *D.O.* 115. *R.M.C.* 152-61. T. 128. *Ros.* *R.N.* 2-5



- 464 **As half solidus.** *D.O.* 115. CONSTANTINUS PP. A. (or similar). *D.O.* 115. dr. and cuir-boss,  
wearing crown with cross; in ex., cross before. B. Large cross with cross between  
the 1 and 2. *D.O.* 115. *R.M.C.* 152-61. T. 128. *Ros.* *R.N.* 2-5

- 465 **As quarter solidus (1/2 denarius).** *D.O.* 115. As last. B. Large cross with cross between  
the 1 and 2. *D.O.* 115. *R.M.C.* 152-61. T. 128. *Ros.* *R.N.* 2-5

# Mint of Constantinian in Numidia (?)

- 466 **As solidus.** *D.O.* 115. CONSTANTINUS PP. A. (or similar). *D.O.* 115. dr. and cuir-boss,  
wearing crown with cross; in ex., cross before. B. Large cross with cross between  
the 1 and 2. *D.O.* 115. *R.M.C.* 152-61. T. 128. *Ros.* *R.N.* 2-5

- 467 **As 12 nummi.** *D.O.* 115. CONSTANTINUS PP. A. (or similar); normally incom-  
plete. *D.O.* 115. dr. and cuir-boss, cross before. B. Large cross with cross between  
the 1 and 2. *D.O.* 115. *R.M.C.* 152-61. T. 128. *Ros.* *R.N.* 2-5

- 468 **As 12 nummi.** *D.O.* 115. CONSTANTINUS PP. A. (or similar); normally incom-  
plete. *D.O.* 115. dr. and cuir-boss, cross before. B. Large cross with cross between  
the 1 and 2. *D.O.* 115. *R.M.C.* 152-61. T. 128. *Ros.* *R.N.* 2-5

Flan  
C

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Very Fine

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Plate  
2



- 512 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

<i>A</i> half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large <i>M</i> below. The obverse is not visible. <i>W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.</i>			
<i>W.</i>	<i>H.</i>	<i>B.</i>	<i>B.</i>
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5

*W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

- 513 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

*W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

*W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

- 514 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

- 515 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

- 516 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

# MAURICE TERRY

Plate  
3

- 517 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

*W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*



# MAURICE TERRY

- 518 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

*W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

<i>A</i> half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large <i>M</i> below. The obverse is not visible. <i>W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.</i>			
<i>W.</i>	<i>H.</i>	<i>B.</i>	<i>B.</i>
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5
1.5	0.5	1.5	1.5

- 519 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

*W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

- 520 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

*W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

- 521 *A* half ballie. 16th century, the reverse of an undated coin, possibly Elizabethan, with a central shield, a crown above, and a large *M* below. The obverse is not visible. *W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

*W. 1.5 cm, H. 0.5 cm. B. 1.5 cm. B. 1.5 cm.*

Year  
Z  
10

- 523 *AE decemnummius*. — R. As two, but with obverse letter to S, and  $\omega\alpha\tau$  on R. D.D.—. *R.M.C.* 196. T = R—. *R.N.* —  
Obverse A only, used for this type.

Very Fine

Mint of Theosopolis (Antioch)

- 524 *AE solidus*. — R.  $\omega\alpha\tau$ ,  $\omega\alpha\tau$ ,  $\omega\alpha\tau$ . PP. 401. On the left, bust facing of Augustus, wearing plumed helmet and holding gladius. On the right,  $\omega\alpha\tau$  (followed by obverse letter). Angel on facing, holding long staff surmounted by  $\theta$ , and  $\alpha\tau$  on reverse. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

Obverse by 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.



525

526

- 525 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 526 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 527 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 528 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 529 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 530 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 531 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 532 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 532 *AE follis*. [Legend actually a badly blundered form of the inscription of Theodosius II, e.g.  $\theta\epsilon\omicron\delta\omicron\varsigma$  +  $\omega\alpha\tau$  +  $\theta\epsilon\omicron\delta\omicron\varsigma$ , but less blundered from 'year 52']. Bust facing, wearing crown with royal ornament, and circular robes, on a band, wings, etc., eagle-tipped sceptre. R. Large  $\omega$  between  $\alpha$  and  $\tau$ ;  $\theta$  and  $\omega\alpha\tau$  representing the regnal year; above,  $\omega\alpha\tau$  (on R). D.D. 552-50. *R.M.C.* (Theodosius II) 88-95, 88-89, 90-91, 92-93. T. 13 Series II, 52-9, 53, 66. *R.* (Theodosius II) 909-91, 909, 910, 911. *R.N.* 5-24.

Place  
Z  
2

The  $\omega$  is the regnal year, but here correct.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

533 *AE follis*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).



534

535

- 534 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 535 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 536 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 537 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 538 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 539 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 540 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).

- 541 *AE solidus*. — R. As two, but with  $\omega\alpha\tau$  on R. D.D. 144. *R.M.C.* 1. P. found in the *Decemnummi*. T. 18, 20, 24. *R.* 1093-95, 1, 14. *R.N.* 1, 2, 3. D. (attributed to Theosopolis).



- 91% of half falls. Obs. 3: 531. 9. 2400 W. (Obs. 1000, 1010, 1020, 1030, 1040, 1050, 1100, 1110, 1120, 1130, 1140, 1150, 1200, 1210, 1220, 1230, 1240, 1250, 1300, 1310, 1320, 1330, 1340, 1350, 1400, 1410, 1420, 1430, 1440, 1450, 1500, 1510, 1520, 1530, 1540, 1550, 1600, 1610, 1620, 1630, 1640, 1650, 1700, 1710, 1720, 1730, 1740, 1750, 1800, 1810, 1820, 1830, 1840, 1850, 1900, 1910, 1920, 1930, 1940, 1950, 2000, 2010, 2020, 2030, 2040, 2050, 2100, 2110, 2120, 2130, 2140, 2150, 2200, 2210, 2220, 2230, 2240, 2250, 2300, 2310, 2320, 2330, 2340, 2350, 2400, 2410, 2420, 2430, 2440, 2450, 2500, 2510, 2520, 2530, 2540, 2550, 2600, 2610, 2620, 2630, 2640, 2650, 2700, 2710, 2720, 2730, 2740, 2750, 2800, 2810, 2820, 2830, 2840, 2850, 2900, 2910, 2920, 2930, 2940, 2950, 3000, 3010, 3020, 3030, 3040, 3050, 3100, 3110, 3120, 3130, 3140, 3150, 3200, 3210, 3220, 3230, 3240, 3250, 3300, 3310, 3320, 3330, 3340, 3350, 3400, 3410, 3420, 3430, 3440, 3450, 3500, 3510, 3520, 3530, 3540, 3550, 3600, 3610, 3620, 3630, 3640, 3650, 3700, 3710, 3720, 3730, 3740, 3750, 3800, 3810, 3820, 3830, 3840, 3850, 3900, 3910, 3920, 3930, 3940, 3950, 4000, 4010, 4020, 4030, 4040, 4050, 4100, 4110, 4120, 4130, 4140, 4150, 4200, 4210, 4220, 4230, 4240, 4250, 4300, 4310, 4320, 4330, 4340, 4350, 4400, 4410, 4420, 4430, 4440, 4450, 4500, 4510, 4520, 4530, 4540, 4550, 4600, 4610, 4620, 4630, 4640, 4650, 4700, 4710, 4720, 4730, 4740, 4750, 4800, 4810, 4820, 4830, 4840, 4850, 4900, 4910, 4920, 4930, 4940, 4950, 5000, 5010, 5020, 5030, 5040, 5050, 5100, 5110, 5120, 5130, 5140, 5150, 5200, 5210, 5220, 5230, 5240, 5250, 5300, 5310, 5320, 5330, 5340, 5350, 5400, 5410, 5420, 5430, 5440, 5450, 5500, 5510, 5520, 5530, 5540, 5550, 5600, 5610, 5620, 5630, 5640, 5650, 5700, 5710, 5720, 5730, 5740, 5750, 5800, 5810, 5820, 5830, 5840, 5850, 5900, 5910, 5920, 5930, 5940, 5950, 6000, 6010, 6020, 6030, 6040, 6050, 6100, 6110, 6120, 6130, 6140, 6150, 6200, 6210, 6220, 6230, 6240, 6250, 6300, 6310, 6320, 6330, 6340, 6350, 6400, 6410, 6420, 6430, 6440, 6450, 6500, 6510, 6520, 6530, 6540, 6550, 6600, 6610, 6620, 6630, 6640, 6650, 6700, 6710, 6720, 6730, 6740, 6750, 6800, 6810, 6820, 6830, 6840, 6850, 6900, 6910, 6920, 6930, 6940, 6950, 7000, 7010, 7020, 7030, 7040, 7050, 7100, 7110, 7120, 7130, 7140, 7150, 7200, 7210, 7220, 7230, 7240, 7250, 7300, 7310, 7320, 7330, 7340, 7350, 7400, 7410, 7420, 7430, 7440, 7450, 7500, 7510, 7520, 7530, 7540, 7550, 7600, 7610, 7620, 7630, 7640, 7650, 7700, 7710, 7720, 7730, 7740, 7750, 7800, 7810, 7820, 7830, 7840, 7850, 7900, 7910, 7920, 7930, 7940, 7950, 8000, 8010, 8020, 8030, 8040, 8050, 8100, 8110, 8120, 8130, 8140, 8150, 8200, 8210, 8220, 8230, 8240, 8250, 8300, 8310, 8320, 8330, 8340, 8350, 8400, 8410, 8420, 8430, 8440, 8450, 8500, 8510, 8520, 8530, 8540, 8550, 8600, 8610, 8620, 8630, 8640, 8650, 8700, 8710, 8720, 8730, 8740, 8750, 8800, 8810, 8820, 8830, 8840, 8850, 8900, 8910, 8920, 8930, 8940, 8950, 9000, 9010, 9020, 9030, 9040, 9050, 9100, 9110, 9120, 9130, 9140, 9150, 9200, 9210, 9220, 9230, 9240, 9250, 9300, 9310, 9320, 9330, 9340, 9350, 9400, 9410, 9420, 9430, 9440, 9450, 9500, 9510, 9520, 9530, 9540, 9550, 9600, 9610, 9620, 9630, 9640, 9650, 9700, 9710, 9720, 9730, 9740, 9750, 9800, 9810, 9820, 9830, 9840, 9850, 9900, 9910, 9920, 9930, 9940, 9950, 10000, 10010, 10020, 10030, 10040, 10050, 10100, 10110, 10120, 10130, 10140, 10150, 10200, 10210, 10220, 10230, 10240, 10250, 10300, 10310, 10320, 10330, 10340, 10350, 10400, 10410, 10420, 10430, 10440, 10450, 10500, 10510, 10520, 10530, 10540, 10550, 10600, 10610, 10620, 10630, 10640, 10650, 10700, 10710, 10720, 10730, 10740, 10750, 10800, 10810, 10820, 10830, 10840, 10850, 10900, 10910, 10920, 10930, 10940, 10950, 11000, 11010, 11020, 11030, 11040, 11050, 11100, 11110, 11120, 11130, 11140, 11150, 11200, 11210, 11220, 11230, 11240, 11250, 11300, 11310, 11320, 11330, 11340, 11350, 11400, 11410, 11420, 11430, 11440, 11450, 11500, 11510, 11520, 11530, 11540, 11550, 11600, 11610, 11620, 11630, 11640, 11650, 11700, 11710, 11720, 11730, 11740, 11750, 11800, 11810, 11820, 11830, 11840, 11850, 11900, 11910, 11920, 1193

The following signal words derive from a manual

1	1.2	4.0	5	62	48	25	3.00	0.00	0.00
100	1.2	1.2							

[illegible]

- [illegible]

$$T_{\text{eff}} = \frac{1}{2} \frac{1}{\pi} \int_0^{2\pi} \frac{1}{1 - \epsilon \cos \theta} d\theta = \frac{1}{2} \frac{1}{\pi} \int_0^{2\pi} \frac{1}{1 - \epsilon \cos \theta} d\theta = \frac{1}{2} \frac{1}{\pi} \int_0^{2\pi} \frac{1}{1 - \epsilon \cos \theta} d\theta$$
[illegible]

- [illegible]

$$L^2(\mathbb{R}^n) \rightarrow L^2(\mathbb{R}^n) \quad (1.1)$$

- [illegible]

1973. *Marine life of the Hawaiian Islands*. Honolulu: University of Hawaii Press. 1000 pp.



## Mina of Alexandria

- [illegible]

## Mind of Cassinette

- [illegible]

*Induragomphus* *novus* is only listed for this region.

1. *at*, *instead*, *in*, *PP*, *av*, *AM* are similarly followed by Greek nouns representing the seat of the body: *in* and *av*, *head*; *during*, *wearing* placed before, and holding *it*, *at* is *the* *leg* *the* *hand* *the* *foot* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe* *the* *heel* *the* *sole* *the* *back* *the* *neck* *the* *head* *the* *face* *the* *eye* *the* *ear* *the* *mouth* *the* *throat* *the* *chest* *the* *back* *the* *stomach* *the* *intestine* *the* *bladder* *the* *anus* *the* *testis* *the* *ovary* *the* *uterus* *the* *vagina* *the* *breast* *the* *arm* *the* *leg* *the* *foot* *the* *hand* *the* *finger* *the* *thumb* *the* *toe*

[illegible]

- A. acuminata**, n. n. num. 115. P. A. followed by Greek letters representing the rest of the Inductives. Dind, 24 and cdy. but 1. R. subjects were, plus followed by the Greek number representing the rest of the Inductives. Veroy, advancing 1, looking 1, holding smooth and gl. 0.1 in ex. 0.0000. P. 0.1 234.5. N.B.E. = .7. 29. R. = .5.5.

 $\text{deg}(h_{\text{max}}) = \text{deg}(h) + 1$  and  $r$  have been noted

- 4 terminals, D. 5, VII-IX, 200-275  $\mu$ m. Antenn. II, 3-segmented, followed by Greek numeral representing the size of the 3rd-segment. Green present.  $\alpha$ -maxillary, P/D 240-7, P.A.L.C. 24-5 (contributed to a green specimen).  $\alpha$ -max. 240-7, P.A.L.C. 24-5

And, of course, you can't have a good one without a good one.

[This topic may belong to the Constantine story, and the letter at Caesarea that records the emperor's conversion, indicating the emperor's conversion at the place of the next stage, see no. 168 below, which is dated "after Constantine's Conversion" (Theodoret 1.1.20).]





## Mint of Ravenna

Very Fine  
Z

- 595 *A solidus*. D. 18. Thick, massive, pp. 400. Crowned bust facing, holding gl. cr. and shield; beaver enamel border. R. Obverse same, followed by officina letters. Aged up, facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ ; in ex. obverse; border as ob. *BM 294, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

*Obverse is only noted for this type.*



595

- 596 D. 18. Crowned bust facing, holding long staff surmounted by  $\lambda$  and shield; beaver enamel border and holding gl. cr. and shield. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 295, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

*Obverse is only noted for this type.*

- 597 *A light weight solidus*. D. 12. Obverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 296, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

*Obverse is only noted for this type.*

- 598 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 297, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 599 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 298, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 600 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 299, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 601 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 300, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 602 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 301, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 603 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 302, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 604 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 303, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 605 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 304, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 606 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 305, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*



598

- 607 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 306, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 608 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 307, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

## Constantinople Mint

- 609 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 308, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 610 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 309, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 611 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 310, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

## Mint of Cherson

(The following are all from the same mint, and are all from the same mint.)

*A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 311, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

*A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 312, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*



609

- 612 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 313, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*

- 613 *A tremissis*. D. 12. Reverse: bust facing, holding long staff surmounted by  $\lambda$ , and gl.  $\alpha$ . *BM 314, R.M.C. 202-3. T. 6. Mon. R.N. p. 281.*







2000

The half-masthead design and complete physical appearance, which seemed to be constructed for about eight years, fit into a period of complete obscurity for the company as a result of the bankruptcy of the American half-masthead, which it was at the time's new being therefore it is all right.

The Narbonne River II was formed at the mouth of its confluence and had its apex in the middle of the Narbonne River, capturing the system and its watershed in the Gironde estuary. The Narbonne River continued to flow into the Gironde and the estuary as well as its watershed.

*In this post-Holocaust, the Exile of "orthodox" Jewish culture, a synthesis of religious and political ideas, it was not long before Rabinowitz, not at the time, some, finally, and he, I think, only, the last time, he lost no time in putting the book, a kind of "copy" of the original, in the hands of the public, and the book, in fact, was published, in 1951.*

The *Enlightenment of Mexico*, which still stands as the foremost history of a country and a people that remains to whom the *Enlightenment* applied its truth, also is one of the best religious books.

## ELIYAHU YEATS AND INHERITORS

Age	Mean Value	Standard Error
30-34	1	0
35-39	2	0
40-44	3	0
45-49	4	0
50-54	5	0
55-59	6	0
60-64	7	0
65-69	8	0

Atlas ref 4 (European map)



1. A solidus, usually, having a width of 10-15 mm, and a length of 10-15 cm, is used to connect the ends of the rods rigidly in the case of a solid "chamber" of a solid body. As a rule, the longer, solidus legs are made of steel, and the shorter, outer legs are of 0.5 mm  $\times$  5  $\times$  25 mm. H.C.

Very little

- |     |   |    |
|-----|---|----|
| 6-8 | Obs. de l'art. trait (revers) a l'etat d'effluve. R. du 414. D.P. 5, 6, 10, 11, 12, 13, 14, 15, 16, 17. R. 1188-92, 1194, 1195, 1196. D.N. 2, 30.   | 12 |
|     | Différence 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 8 |    |



- [illegible]

Very Fine  
F

- 678 *A* light weight siliqua (2.50 grs.). Obv. As 144, but without cross. R. VICTORIA stnd. Followed by officina letter. Arched sig. below, holding long cross and palm branch. *PL* 25. *A.H.C.*, pp. 141-2. *B.N.*, p. 224. (See "Epist. 1044: *Andri* and *Thessalonica* 2 made during the Sixth and Seventh Centuries", by Florent J. Delbecq, pp. 194-201, nos. 199, 191, 199-19, and plates xiii and vi.)
- Officina A, 2 and 1 have been noted.
- 679 Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.

Officina A, 2 and 1 have been noted.

- 680 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.



681

682

- 681 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.
- 682 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.
- 683 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.
- 684 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.



685

686

- 687 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.

Fine  
C

- 688 "CERAMONIAI" SILVER COINAGE. 8 siliqua (2.185 grs.). Obv. As 104, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 25. *A.H.C.*, pp. 144-5, nos. 2, 3. *B.N.*, p. 224.
- 689 *A* siliqua (2.50 grs.). Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.
- 690 *A* siliqua (2.50 grs.). Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.



691

692

- 693 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.
- 694 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.



695

696

- 697 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.
- 698 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.

699 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.

700 *A* siliqua. Obv. As 105, but without cross. R. VICTORIA stnd. Followed by officina letter. As 144. *PL* 16. *A.H.C.*, p. 124. *B.N.*, p. 223.





966. *Æ* three-quarter follis. - Crowded, and over half blank. - Fine  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 75. R.A.C. — T —  
R. — B.N. p. 233

*Equal year would indicate minting for this coin.*



967

968

967. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*

968. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*

969. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*

970. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*

*Equal year would indicate minting for this coin.*

#### Mint of Therapollis (Cyzicus)



971

971. *Æ* follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*

*Equal year would indicate minting for this coin.*



972

972. *Æ* follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*

973. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*

974. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*



974

974. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*



975

976

977

978

975. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*

976. *Æ* half follis. - obverse, seated god, as in 966. - Reverse and blank.  
[large cross] above, cross] to the, unusual representation of seated god  
in ex. 932 (followed by officina letters). D.O. 74. R.A.C. — T —  
R. — B.N. p. 233

*Obverse, seated god, as in 966.*



## Mind of Rome

- 99-3 *St. baileyi* (Pursh), *St. baileyi* (Pursh) (Asteraceae). The seed coat is yellowish green, showing convex anterior pordia, and breaking off as a large triangular piece, as in *St. baileyi* (Pursh) (Asteraceae), p. 18, fig. 2. *St. baileyi* (Pursh) (Asteraceae).
- 99-4 *St. baileyi* (Pursh), *St. baileyi* (Pursh) (Asteraceae). The seed coat is yellowish green, showing convex anterior pordia, and breaking off as a large triangular piece, as in *St. baileyi* (Pursh) (Asteraceae), p. 18, fig. 2. *St. baileyi* (Pursh) (Asteraceae).
- 99-5 *St. baileyi* (Pursh), *St. baileyi* (Pursh) (Asteraceae). The seed coat is yellowish green, showing convex anterior pordia, and breaking off as a large triangular piece, as in *St. baileyi* (Pursh) (Asteraceae), p. 18, fig. 2. *St. baileyi* (Pursh) (Asteraceae).

### Start of Research

- [illegible]



## FIDUCAS

## Paper 1

## Vern Riffe

- 200 = At last, but how! B. At last. D.O.—, D.M.C.—, T.—,  
K.—, D.N. 3-4

295. Al. Teflin, D. N. Hsiao, L. P. Av. Cholesterol [ole. and satir, 2] have C<sub>27</sub>H<sub>46</sub>, holding at 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 83

- Revised manuscript accepted 25 June 1990*

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- [illegible]

- [illegible]

Alcibiades Speaks (Carr-Saunders?)

## Very High

- [illegible]

## 1









Very Fine  
£

29a



29b

29a. A solidus. — As last. — H. As 735, but with a following of the officina letter. D.O. 22. H.M.C. 21, 73.6. F. 160, 161. R. 166. H.N. 28.

Officina  $\alpha$ ,  $\gamma$  and  $\theta$  have been noted.

29b. — As last. — H. As 736, but with a  $\gamma$  instead of a  $\theta$  having the officina letter. D.O. 24. H.M.C. 21, 73.6. F. 160. R.N. 26—but none from the officina letter has been as yet noted. D.O. 25. H.M.C. 21.

Officina  $\alpha$  only noted for this type.

30a. — As last. — H. As last, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 23. H.M.C. 21, 73.6. F. 160. R.N. 27. H.N. 29.

Officina  $\alpha$  only noted for this type.

30b. — Facing head of Heracles (30a) and Heracles' Gorgon. — On each were oblique and cross with cross on cross. H. Heracles has long beard and whiskers, while Gorgon has curly crown with a slight beard and mustache above eyes. R. Gorgon has a cross followed by officina letter. Cross points on three steps, cross on fourth. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$ ,  $\theta$ ,  $\eta$ ,  $\zeta$ ,  $\iota$ ,  $\kappa$ ,  $\mu$  and  $\nu$  have been noted.

30c. — As last. — H. As last, but the whole is  $\gamma$  instead of a  $\theta$ . D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$  only noted for this type.

30d. — As last. — H. As last, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 22. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$ ,  $\gamma$  and  $\theta$  have been noted.

30e. — As last. — H. As last, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 24. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$  only noted for this type.

30f. — As last. — H. As 736, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 24. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$  and  $\gamma$  have been noted.

30g. — As last. — H. As last, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$  only noted for this type.

30h. — As last. — H. As last, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$ ,  $\gamma$  and  $\theta$  have been noted.

30i. — As last. — H. As 736, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$  and  $\gamma$  have been noted.

30j. — As last. — H. As 736, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$ ,  $\gamma$  and  $\theta$  have been noted.

Very Fine  
£

30a



30b

30a. No legend. Heraclius (in center), Heracles Constantinian (on  $\alpha$ ) and Heracles (on  $\beta$ ) all sig. facing. The figure of Heracles much smaller than his father and brother; Heracles has long beard and mustache, whilst his two sons are beardless. They each hold a  $\gamma$  or a  $\theta$  in hand, and wear chiton, Heracles and his elder son are crowned, but Heracles is uncrowned and wears plain cap, in field above his head, cross. R. VICTORIA  $\alpha$   $\alpha$   $\alpha$  (followed by officina letter). Cross points on three steps, above heron's, in field to r. Monogram 21. D.O. 23. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$ ,  $\theta$ ,  $\eta$ ,  $\zeta$ ,  $\iota$ ,  $\kappa$  and  $\nu$  have been noted.

30b. — As last, but the figure of Heracles is larger. — H. As last, but with Monogram 21 in field to l., and a  $\gamma$  to r. D.O. 23. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$ ,  $\theta$ ,  $\eta$ ,  $\zeta$ ,  $\iota$ ,  $\kappa$  and  $\nu$  have been noted.

30c. — As last. — H. As last, but with a following of the officina letter. D.O. 24. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$  and  $\theta$  have been noted.

30d. — As last. — H. As 735, but with Monogram 21 in field to l., and a  $\gamma$  to r. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$ ,  $\theta$ ,  $\eta$ ,  $\zeta$ ,  $\iota$ ,  $\kappa$  and  $\nu$  have been noted.

30e. — As last. — H. As last, but with a following of the officina letter. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$  and  $\theta$  have been noted.

30f. — As 736, but Heracles Constantinian and Heracles are of equal size and the latter wears crown; no cross in field. — H. As 736, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. Cross points on three steps, above heron's, in field to l. Monogram 21; to r.  $\gamma$ . D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28.

Officina  $\alpha$ ,  $\gamma$  and  $\theta$  have been noted.

30g. — H. As last, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$ ,  $\theta$ ,  $\eta$ ,  $\zeta$ ,  $\iota$ ,  $\kappa$  and  $\nu$  have been noted.

30h. — As last, but with a following of the officina letter. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$  and  $\theta$  have been noted.

30i. — As last, but with a  $\gamma$  instead of a  $\theta$  following the officina letter. D.O. 25. H.M.C. 21, 73.6. F. 160. R.N. 28. H.N. 30.

Officina  $\alpha$ ,  $\gamma$ ,  $\theta$  and  $\nu$  have been noted.

Very Fine  
L

507

507 *A* light weight solidus: 23 obverse. Obv. As 752, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.

508 — R. As last, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, 2, 3, and 4 have been used.

509 — R. As 507, but without a cross on reverse. D.O. 15. R.M.C. 40-42. P. 393, 394, 395, 431, 438. R. 1498-99. P. 404, 411.

Officina 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

510 — R. As 701, but with a large cross on reverse. D.O. 14. R.M.C. 55, 75, 76, and 142, note 1. 1, 139, 406, 407, 410, 418. R. = R.N. 72-1.

Officina 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

511 — R. As 701, but with a large cross on reverse. D.O. 45. R.M.C. 68, 7, 94. R. = R.N. p. 267.

Officina 1, and 2 have been used.

512 *A* light weight solidus: 23 obverse. Obv. As 701, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.

513 — R. As last, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, 2, 3, and 4 have been used.

514 *A* light weight solidus: 22 obverse. Obv. As 752, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.

515 Obv. As 712, 4. As last, D.O. 17. R.M.C. 7, 1. R. = R.N. p. 268.

Officina 1, only used for this type.

516 No legend. Obv. As 752, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.

517 No legend. Obv. As 752, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.

518 No legend. Obv. As 752, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.

519 No legend. Obv. As 752, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.

Very Fine  
L

520 *A* light weight solidus: 23 obverse. Obv. As 752, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.

521 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

522 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

523 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

524 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

525 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

526 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

527 *A* light weight solidus: 23 obverse. Obv. As 752, but without cross. R. VICTORIA ARA.4 followed by officina letters. Cross pattern on reverse, cross beneath. D.O. 1. R.M.C. = T. = R. = R.N. p. 268.

Officina 1, only used for this type.



185

170

528 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

529 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

530 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

531 Obv. As 773, but with a large cross on reverse. D.O. 42. R.M.C. 52, 49. P. 404, 408. R. = R.N. p. 268.

Officina 1, only used for this type.

## Very Fine

- 767 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10
- Obverse (sometimes) only used for this type.  
[See also following 184].

- 768 "MEMPHISIAN" SILVER COINAGE. Millareson is evidenced on Sc. 375 pm. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 769 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 770 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 771 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 772 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 773 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 774 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 775 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 776 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

## Very Fine



184 185 186 187

- 184 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 185 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 186 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 187 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 188 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 189 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 190 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 191 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 192 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 193 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 194 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

- 195 *A. tremula*. D. N. HERACLES 177. AN. (for similar). As 1/2, always bearded. R. As 1/2, legend always followed by official name. D. 0.58. R. 0.55. T. 28. R. 1.26. R. N. 35. 10

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927

422 **5. *Salicornia*.** *S. ELONGATA* CH. THOM. *PL. INDICAE* 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524

*Causes of this type resemble the ones attributed to that type of their Downy-mould disorders, but are somewhat unusual.*

Very High  
C[illegible]

Revised: 1997-01-15

It has been



2

[illegible]

The 2nd stage neural network used different type of model

id	name	age	sex	height	weight
1	John	25	Male	175	180
2	Jane	30	Female	160	150
3	Bob	22	Male	180	190
4	Alice	28	Female	170	175
5	Charlie	35	Male	190	200
6	Diana	27	Female	165	160
7	Frank	23	Male	175	185
8	Grace	32	Female	170	170
9	Henry	29	Male	185	195
10	Ivy	26	Female	160	165
11	Jack	31	Male	175	180
12	Karen	24	Female	165	170
13	Leo	20	Male	170	175
14	Mia	33	Female	175	180
15	Noah	21	Male	180	185
16	Olivia	29	Female	160	165
17	Peter	34	Male	190	200
18	Quinn	26	Female	170	175
19	Rachel	23	Female	165	170
20	Sam	30	Male	185	190
21	Tina	27	Female	170	175
22	Uma	25	Female	160	165
23	Victor	32	Male	180	185
24	Wendy	28	Female	175	180
25	Xavier	24	Male	170	175
26	Yara	31	Female	165	170
27	Zoe	22	Female	160	165
28	Adam	29	Male	185	190
29	Eve	26	Female	170	175
30	Frank	33	Male	190	200
31	Grace	27	Female	165	170
32	Henry	24	Male	175	180
33	Ivy	30	Female	170	175
34	Jack	21	Male	180	185
35	Karen	28	Female	160	165
36	Leo	35	Male	190	200
37	Mia	23	Female	170	175
38	Noah	32	Male	185	190
39	Olivia	25	Female	165	170
40	Peter	29	Male	175	180
41	Quinn	26	Female	170	175
42	Rachel	31	Female	160	165
43	Sam	24	Male	180	185
44	Tina	27	Female	170	175
45	Uma	30	Female	165	170
46	Victor	22	Male	175	180
47	Wendy	28	Female	170	175
48	Xavier	33	Male	190	200
49	Yara	25	Female	160	165
50	Zoe	29	Female	175	180

Let  $\tilde{L}_1$  and  $\tilde{L}_2$  be the smaller and larger of  $L_1$  and  $L_2$ , respectively.

## First



82

950

425 No legend. Heraclion, Hamaque Garmasine and the Empire. Statues of  
 426 the king, as on the figure of Heraclion Garmasine and Mapin  
 427 are usually indistinguishable from each other when they can be described the Empire  
 428 is usually on the 1, and the map on the 2. 3. As long as on, as on  
 429 the 1, as on the 2, as on the 3, as on the 4, as on the 5, as on the 6, as on the 7, as on the 8, as on the 9, as on the 10, as on the 11, as on the 12, as on the 13, as on the 14, as on the 15, as on the 16, as on the 17, as on the 18, as on the 19, as on the 20, as on the 21, as on the 22, as on the 23, as on the 24, as on the 25, as on the 26, as on the 27, as on the 28, as on the 29, as on the 30, as on the 31, as on the 32, as on the 33, as on the 34, as on the 35, as on the 36, as on the 37, as on the 38, as on the 39, as on the 40, as on the 41, as on the 42, as on the 43, as on the 44, as on the 45, as on the 46, as on the 47, as on the 48, as on the 49, as on the 50, as on the 51, as on the 52, as on the 53, as on the 54, as on the 55, as on the 56, as on the 57, as on the 58, as on the 59, as on the 60, as on the 61, as on the 62, as on the 63, as on the 64, as on the 65, as on the 66, as on the 67, as on the 68, as on the 69, as on the 70, as on the 71, as on the 72, as on the 73, as on the 74, as on the 75, as on the 76, as on the 77, as on the 78, as on the 79, as on the 80, as on the 81, as on the 82, as on the 83, as on the 84, as on the 85, as on the 86, as on the 87, as on the 88, as on the 89, as on the 90, as on the 91, as on the 92, as on the 93, as on the 94, as on the 95, as on the 96, as on the 97, as on the 98, as on the 99, as on the 100, as on the 101, as on the 102, as on the 103, as on the 104, as on the 105, as on the 106, as on the 107, as on the 108, as on the 109, as on the 110, as on the 111, as on the 112, as on the 113, as on the 114, as on the 115, as on the 116, as on the 117, as on the 118, as on the 119, as on the 120, as on the 121, as on the 122, as on the 123, as on the 124, as on the 125, as on the 126, as on the 127, as on the 128, as on the 129

The *Salmon and Hermalin (1988)* and *Johnson* have been revised.

[illegible]

0.5) For legend: Hruskas, 1a, 1b, 1c, 1d, 1e, and 1f; Hruskas, 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j, 2k, 2l, 2m, 2n, 2o, 2p, 2q, 2r, 2s, 2t, 2u, 2v, 2w, 2x, 2y, 2z, 2aa, 2ab, 2ac, 2ad, 2ae, 2af, 2ag, 2ah, 2ai, 2aj, 2ak, 2al, 2am, 2an, 2ao, 2ap, 2aq, 2ar, 2as, 2at, 2au, 2av, 2aw, 2ax, 2ay, 2az, 2ba, 2bb, 2bc, 2bd, 2be, 2bf, 2bg, 2bh, 2bi, 2bj, 2bk, 2bl, 2bm, 2bn, 2bo, 2bp, 2bq, 2br, 2bs, 2bt, 2bu, 2bv, 2bw, 2bx, 2by, 2bz, 2ca, 2cb, 2cc, 2cd, 2ce, 2cf, 2cg, 2ch, 2ci, 2cj, 2ck, 2cl, 2cm, 2cn, 2co, 2cp, 2cq, 2cr, 2cs, 2ct, 2cu, 2cv, 2cw, 2cx, 2cy, 2cz, 2da, 2db, 2dc, 2dd, 2de, 2df, 2dg, 2dh, 2di, 2dj, 2dk, 2dl, 2dm, 2dn, 2do, 2dp, 2dq, 2dr, 2ds, 2dt, 2du, 2dv, 2dw, 2dx, 2dy, 2dz, 2ea, 2eb, 2ec, 2ed, 2ee, 2ef, 2eg, 2eh, 2ei, 2ej, 2ek, 2el, 2em, 2en, 2eo, 2ep, 2eq, 2er, 2es, 2et, 2eu, 2ev, 2ew, 2ex, 2ey, 2ez, 2fa, 2fb, 2fc, 2fd, 2fe, 2ff, 2fg, 2fh, 2fi, 2fj, 2fk, 2fl, 2fm, 2fn, 2fo, 2fp, 2fq, 2fr, 2fs, 2ft, 2fu, 2fv, 2fw, 2fx, 2fy, 2fz, 2ga, 2gb, 2gc, 2gd, 2ge, 2gf, 2gg, 2gh, 2gi, 2gj, 2gk, 2gl, 2gm, 2gn, 2go, 2gp, 2gq, 2gr, 2gs, 2gt, 2gu, 2gv, 2gw, 2gx, 2gy, 2gz, 2ha, 2hb, 2hc, 2hd, 2he, 2hf, 2hg, 2hh, 2hi, 2hj, 2hk, 2hl, 2hm, 2hn, 2ho, 2hp, 2hq, 2hr, 2hs, 2ht, 2hu, 2hv, 2hw, 2hx, 2hy, 2hz, 2ia, 2ib, 2ic, 2id, 2ie, 2if, 2ig, 2ih, 2ii, 2ij, 2ik, 2il, 2im, 2in, 2io, 2ip, 2iq, 2ir, 2is, 2it, 2iu, 2iv, 2iw, 2ix, 2iy, 2iz, 2ja, 2jb, 2jc, 2jd, 2je, 2jf, 2jg, 2jh, 2ji, 2jj, 2jk, 2jl, 2jm, 2jn, 2jo, 2jp, 2jq, 2jr, 2js, 2jt, 2ju, 2jv, 2jw, 2jx, 2jy, 2jz, 2ka, 2kb, 2kc, 2kd, 2ke, 2kf, 2kg, 2kh, 2ki, 2kj, 2kk, 2kl, 2km, 2kn, 2ko, 2kp, 2kq, 2kr, 2ks, 2kt, 2ku, 2kv, 2kw, 2kx, 2ky, 2kz, 2la, 2lb, 2lc, 2ld, 2le, 2lf, 2lg, 2lh, 2li, 2lj, 2lk, 2ll, 2lm, 2ln, 2lo, 2lp, 2lq, 2lr, 2ls, 2lt, 2lu, 2lv, 2lw, 2lx, 2ly, 2lz, 2ma, 2mb, 2mc, 2md, 2me, 2mf, 2mg, 2mh, 2mi, 2mj, 2mk, 2ml, 2mm, 2mn, 2mo, 2mp, 2mq, 2mr, 2ms, 2mt, 2mu, 2mv, 2mw, 2mx, 2my, 2mz, 2na, 2nb, 2nc, 2nd, 2ne, 2nf, 2ng, 2nh, 2ni, 2nj, 2nk, 2nl, 2nm, 2nn, 2no, 2np, 2nq, 2nr, 2ns, 2nt, 2nu, 2nv, 2nw, 2nx, 2ny, 2nz, 2oa, 2ob, 2oc, 2od, 2oe, 2of, 2og, 2oh, 2oi, 2oj, 2ok, 2ol, 2om, 2on, 2oo, 2op, 2oq, 2or, 2os, 2ot, 2ou, 2ov, 2ow, 2ox, 2oy, 2oz, 2pa, 2pb, 2pc, 2pd, 2pe, 2pf, 2pg, 2ph, 2pi, 2pj, 2pk, 2pl, 2pm, 2pn, 2po, 2pp, 2pq, 2pr, 2ps, 2pt, 2pu, 2pv, 2pw, 2px, 2py, 2pz, 2qa, 2qb, 2qc, 2qd, 2qe, 2qf, 2qg, 2qh, 2qi, 2qj, 2qk, 2ql, 2qm, 2qn, 2qo, 2qp, 2qq, 2qr, 2qs, 2qt, 2qu, 2qv, 2qw, 2qx, 2qy, 2qz, 2ra, 2rb, 2rc, 2rd, 2re, 2rf, 2rg, 2rh, 2ri, 2rj, 2rk, 2rl, 2rm, 2rn, 2ro, 2rp, 2rq, 2rr, 2rs, 2rt, 2ru, 2rv, 2rw, 2rx, 2ry, 2rz, 2sa, 2sb, 2sc, 2sd, 2se, 2sf, 2sg, 2sh, 2si, 2sj, 2sk, 2sl, 2sm, 2sn, 2so, 2sp, 2sq, 2sr, 2ss, 2st, 2su, 2sv, 2sw, 2sx, 2sy, 2sz, 2ta, 2tb, 2tc, 2td, 2te, 2tf, 2tg, 2th, 2ti, 2tj, 2tk, 2tl, 2tm, 2tn, 2to, 2tp, 2tq, 2tr, 2ts, 2tt, 2tu, 2tv, 2tw, 2tx, 2ty, 2tz, 2ua, 2ub, 2uc, 2ud, 2ue, 2uf, 2ug, 2uh, 2ui, 2uj, 2uk, 2ul, 2um, 2un, 2uo, 2up, 2uq, 2ur, 2us, 2ut, 2uu, 2uv, 2uw, 2ux, 2uy, 2uz, 2va, 2vb, 2vc, 2vd, 2ve, 2vf, 2vg, 2vh, 2vi, 2vj, 2vk, 2vl, 2vm, 2vn, 2vo, 2vp, 2vq, 2vr, 2vs, 2vt, 2vu, 2vv, 2vw, 2vx, 2vy, 2vz, 2wa, 2wb, 2wc, 2wd, 2we, 2wf, 2wg, 2wh, 2wi, 2wj, 2wk, 2wl, 2wm, 2wn, 2wo, 2wp, 2wq, 2wr, 2ws, 2wt, 2wu, 2wv, 2ww, 2wx, 2wy, 2wz, 2xa, 2xb, 2xc, 2xd, 2xe, 2xf, 2xg, 2xh, 2xi, 2xj, 2xk, 2xl, 2xm, 2xn, 2xo, 2xp, 2xq, 2xr, 2xs, 2xt, 2xu, 2xv, 2xw, 2xx, 2xy, 2xz, 2ya, 2yb, 2yc, 2yd, 2ye, 2yf, 2yg, 2yh, 2yi, 2yj, 2yk, 2yl, 2ym, 2yn, 2yo, 2yp, 2yq, 2yr, 2ys, 2yt, 2yu, 2yv, 2yw, 2yx, 2yy, 2yz, 2za, 2zb, 2zc, 2zd, 2ze, 2zf, 2zg, 2zh, 2zi, 2zj, 2zk, 2zl, 2zm, 2zn, 2zo, 2zp, 2zq, 2zr, 2zs, 2zt, 2zu, 2zv, 2zw, 2zx, 2zy, 2zz, 2aa, 2ab, 2ac, 2ad, 2ae, 2af, 2ag, 2ah, 2ai, 2aj, 2ak, 2al, 2am, 2an, 2ao, 2ap, 2aq, 2ar, 2as, 2at, 2au, 2av, 2aw, 2ax, 2ay, 2az, 2ba, 2bb, 2bc, 2bd, 2be, 2bf, 2bg, 2bh, 2bi, 2bj, 2bk, 2bl, 2bm, 2bn, 2bo, 2bp, 2bq, 2br, 2bs, 2bt, 2bu, 2bv, 2bw, 2bx, 2by, 2bz, 2ca, 2cb, 2cc, 2cd, 2ce, 2cf, 2cg, 2ch, 2ci, 2cj, 2ck, 2cl, 2cm, 2cn, 2co, 2cp, 2cq, 2cr, 2cs, 2ct, 2cu, 2cv, 2cw, 2cx, 2cy, 2cz, 2da, 2db, 2dc, 2dd, 2de, 2df, 2dg, 2dh, 2di, 2dj, 2dk, 2dl, 2dm, 2dn, 2do, 2dp, 2dq, 2dr, 2ds, 2dt, 2du, 2dv, 2dw, 2dx, 2dy, 2dz, 2ea, 2eb, 2ec, 2ed, 2ee, 2ef, 2eg, 2eh, 2ei, 2ej, 2ek, 2el, 2em, 2en, 2eo, 2ep, 2eq, 2er, 2es, 2et, 2eu, 2ev, 2ew, 2ex, 2ey, 2ez, 2fa, 2fb, 2fc, 2fd, 2fe, 2ff, 2fg, 2fh, 2fi, 2fj, 2fk, 2fl, 2fm, 2fn, 2fo, 2fp, 2fq, 2fr, 2fs, 2ft, 2fu, 2fv, 2fw, 2fx, 2fy, 2fz, 2ga, 2gb, 2gc, 2gd, 2ge, 2gf, 2gg, 2gh, 2gi, 2gj, 2gk, 2gl, 2gm, 2gn, 2go, 2gp, 2gq, 2gr, 2gs, 2gt, 2gu, 2gv, 2gw, 2gx, 2gy, 2gz, 2ha, 2hb, 2hc, 2hd, 2he, 2hf, 2hg, 2hh, 2hi, 2hj, 2hk, 2hl, 2hm, 2hn, 2ho, 2hp, 2hq, 2hr, 2hs, 2ht, 2hu, 2hv, 2hw, 2hx, 2hy, 2hz, 2ia, 2ib, 2ic, 2id, 2ie, 2if, 2ig, 2ih, 2ii, 2ij, 2ik, 2il, 2im, 2in, 2io, 2ip, 2iq, 2ir, 2is, 2it, 2iu, 2iv, 2iw, 2ix, 2iy, 2iz, 2ja, 2jb, 2jc, 2jd, 2je, 2jf, 2jg, 2jh, 2ji, 2jj, 2jk, 2jl, 2jm, 2jn, 2jo, 2jp, 2jq, 2jr, 2js, 2jt, 2ju, 2jv, 2jw, 2jx, 2jy, 2jz, 2ka, 2kb, 2kc, 2kd, 2ke, 2kf, 2kg, 2kh, 2ki, 2kj, 2kk, 2kl, 2km, 2kn, 2ko, 2kp, 2kq, 2kr, 2ks, 2kt, 2ku, 2kv, 2kw, 2kx, 2ky, 2kz, 2la, 2lb, 2lc, 2ld, 2le, 2lf, 2lg, 2lh, 2li, 2lj, 2lk

<sup>512</sup> R. three-quarter Talle. 100. At last. H. Large A. brown.  $x = 0.75$ , is red orange approaching the yellow part; brownish, all the letters in ex. in c. 1959. 152. *Stellat.*, *T.* —, R. 140. R.N. p. 284.Local max.  $\frac{2}{3}$  with efficient  $\lambda$  cost for this input

This case is sometimes referred to as *after* of the same name.

5/16. At half-fall, a. d. 1900, from 10 to 12, and one smaller. Unmated, 20, and one, but lacking work about beard, holding gl. m. B. large ex. above, same; to 20, narrow, representing the equal part; in ex. 100. 7/13, 101. B. 2/1, 101. T. 101. B. 2/1, 101. B. 2/1, 101.

It is a large  $k$ -hypergraph  $\mathcal{A} = \{A_i \mid 1 \leq i \leq n\}$

Good year (rank,  $T=5$ ,  $B(14, 3)25$ ,  $P(37/1, 3)25$ , 7.58,  $R_c = 0.57$ , 2.20)

Bad year: " " only listed for this crop.

Let us illustrate: we consider, without loss of generality, the

6. *Aspidiotus* (new genus, monobalans sp., sometimes found, at on 5/4  
6. *Aspidiotus* (new genus, monobalans sp., sometimes found, at on 5/4  
6. *Aspidiotus* (new genus, monobalans sp., sometimes found, at on 5/4

The authors are grateful to the referees for their constructive comments.

7	8	9	4	17	20	5
11			13		16	

Fig. 1. *Left* - a transverse section made in left half of capsule (a);

- 1-11. *St. half full*. No legend. Hatching, Hatched. Cut double and 0-  
Empire. Marked at top, facing, as on 125 and 106. R. 5-10, 15-18  
and 100. R. 11. *St. full*. 7-10, 15-18, 100. R. 11. 15-18, 100.

Formal year  $\frac{X}{11}$  only used for this type.

- [illegible]

Keywords: *Parent II only; Parent II only; Parent II only*

Abstract of *Neurospora crassa*

445

45

- [illegible]

The  $\Delta\beta_{\text{eff}}^{\text{eff}}(\omega)$  is calculated as  $\Delta\beta_{\text{eff}}^{\text{eff}}(\omega) = \beta_{\text{eff}}^{\text{eff}}(\omega) - \beta_{\text{eff}}^{\text{eff}}(\omega_0)$ .

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405</
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- 534 I assume, in the 19th century, that  $\alpha = 20^\circ$ ,  $\beta = 30^\circ$ ,  $\gamma = 40^\circ$ ,  $\delta = 50^\circ$ ,  $\epsilon = 60^\circ$ ,  $\zeta = 70^\circ$ ,  $\eta = 80^\circ$ ,  $\theta = 90^\circ$ ,  $\iota = 100^\circ$ ,  $\kappa = 110^\circ$ ,  $\lambda = 120^\circ$ ,  $\mu = 130^\circ$ ,  $\nu = 140^\circ$ ,  $\xi = 150^\circ$ ,  $\omicron = 160^\circ$ ,  $\pi = 170^\circ$ ,  $\rho = 180^\circ$ ,  $\sigma = 190^\circ$ ,  $\tau = 200^\circ$ ,  $\upsilon = 210^\circ$ ,  $\phi = 220^\circ$ ,  $\chi = 230^\circ$ ,  $\psi = 240^\circ$ ,  $\omega = 250^\circ$ ,  $\kappa = 260^\circ$ ,  $\lambda = 270^\circ$ ,  $\mu = 280^\circ$ ,  $\nu = 290^\circ$ ,  $\xi = 300^\circ$ ,  $\omicron = 310^\circ$ ,  $\pi = 320^\circ$ ,  $\rho = 330^\circ$ ,  $\sigma = 340^\circ$ ,  $\tau = 350^\circ$ ,  $\upsilon = 360^\circ$ ,  $\phi = 370^\circ$ ,  $\chi = 380^\circ$ ,  $\psi = 390^\circ$ ,  $\omega = 400^\circ$ ,  $\kappa = 410^\circ$ ,  $\lambda = 420^\circ$ ,  $\mu = 430^\circ$ ,  $\nu = 440^\circ$ ,  $\xi = 450^\circ$ ,  $\omicron = 460^\circ$ ,  $\pi = 470^\circ$ ,  $\rho = 480^\circ$ ,  $\sigma = 490^\circ$ ,  $\tau = 500^\circ$ ,  $\upsilon = 510^\circ$ ,  $\phi = 520^\circ$ ,  $\chi = 530^\circ$ ,  $\psi = 540^\circ$ ,  $\omega = 550^\circ$ ,  $\kappa = 560^\circ$ ,  $\lambda = 570^\circ$ ,  $\mu = 580^\circ$ ,  $\nu = 590^\circ$ ,  $\xi = 600^\circ$ ,  $\omicron = 610^\circ$ ,  $\pi = 620^\circ$ ,  $\rho = 630^\circ$ ,  $\sigma = 640^\circ$ ,  $\tau = 650^\circ$ ,  $\upsilon = 660^\circ$ ,  $\phi = 670^\circ$ ,  $\chi = 680^\circ$ ,  $\psi = 690^\circ$ ,  $\omega = 700^\circ$ ,  $\kappa = 710^\circ$ ,  $\lambda = 720^\circ$ ,  $\mu = 730^\circ$ ,  $\nu = 740^\circ$ ,  $\xi = 750^\circ$ ,  $\omicron = 760^\circ$ ,  $\pi = 770^\circ$ ,  $\rho = 780^\circ$ ,  $\sigma = 790^\circ$ ,  $\tau = 800^\circ$ ,  $\upsilon = 810^\circ$ ,  $\phi = 820^\circ$ ,  $\chi = 830^\circ$ ,  $\psi = 840^\circ$ ,  $\omega = 850^\circ$ ,  $\kappa = 860^\circ$ ,  $\lambda = 870^\circ$ ,  $\mu = 880^\circ$ ,  $\nu = 890^\circ$ ,  $\xi = 900^\circ$ ,  $\omicron = 910^\circ$ ,  $\pi = 920^\circ$ ,  $\rho = 930^\circ$ ,  $\sigma = 940^\circ$ ,  $\tau = 950^\circ$ ,  $\upsilon = 960^\circ$ ,  $\phi = 970^\circ$ ,  $\chi = 980^\circ$ ,  $\psi = 990^\circ$ ,  $\omega = 1000^\circ$ ,  $\kappa = 1010^\circ$ ,  $\lambda = 1020^\circ$ ,  $\mu = 1030^\circ$ ,  $\nu = 1040^\circ$ ,  $\xi = 1050^\circ$ ,  $\omicron = 1060^\circ$ ,  $\pi = 1070^\circ$ ,  $\rho = 1080^\circ$ ,  $\sigma = 1090^\circ$ ,  $\tau = 1100^\circ$ ,  $\upsilon = 1110^\circ$ ,  $\phi = 1120^\circ$ ,  $\chi = 1130^\circ$ ,  $\psi = 1140^\circ$ ,  $\omega = 1150^\circ$ ,  $\kappa = 1160^\circ$ ,  $\lambda = 1170^\circ$ ,  $\mu = 1180^\circ$ ,  $\nu = 1190^\circ$ ,  $\xi = 1200^\circ$ ,  $\omicron = 1210^\circ$ ,  $\pi = 1220^\circ$ ,  $\rho = 1230^\circ$ ,  $\sigma = 1240^\circ$ ,  $\tau = 1250^\circ$ ,  $\upsilon = 1260^\circ$ ,  $\phi = 1270^\circ$ ,  $\chi = 1280^\circ$ ,  $\psi = 1290^\circ$ ,  $\omega = 1300^\circ$ ,  $\kappa = 1310^\circ$ ,  $\lambda = 1320^\circ$ ,  $\mu = 1330^\circ$ ,  $\nu = 1340^\circ$ ,  $\xi = 1350^\circ$ ,  $\omicron = 1360^\circ$ ,  $\pi = 1370^\circ$ ,  $\rho = 1380^\circ$ ,  $\sigma = 1390^\circ$ ,  $\tau = 1400^\circ$ ,  $\upsilon = 1410^\circ$ ,  $\phi = 1420^\circ$ ,  $\chi = 1430^\circ$ ,  $\psi = 1440^\circ$ ,  $\omega = 1450^\circ$ ,  $\kappa = 1460^\circ$ ,  $\lambda = 1470^\circ$ ,  $\mu = 1480^\circ$ ,  $\nu = 1490^\circ$ ,  $\xi = 1500^\circ$ ,  $\omicron = 1510^\circ$ ,  $\pi = 1520^\circ$ ,  $\rho = 1530^\circ$ ,  $\sigma = 1540^\circ$ ,  $\tau = 1550^\circ$ ,  $\upsilon = 1560^\circ$ ,  $\phi = 1570^\circ$ ,  $\chi = 1580^\circ$ ,  $\psi = 1590^\circ$ ,  $\omega = 1600^\circ$ ,  $\kappa = 1610^\circ$ ,  $\lambda = 1620^\circ$ ,  $\mu = 1630^\circ$ ,  $\nu = 1640^\circ$ ,  $\xi = 1650^\circ$ ,  $\omicron = 1660^\circ$ ,  $\pi = 1670^\circ$ ,  $\rho = 1680^\circ$ ,  $\sigma = 1690^\circ$ ,  $\tau = 1700^\circ$ ,  $\upsilon = 1710^\circ$ ,  $\phi = 1720^\circ$ ,  $\chi = 1730^\circ$ ,  $\psi = 1740^\circ$ ,  $\omega = 1750^\circ$ ,  $\kappa = 1760^\circ$ ,  $\lambda = 1770^\circ$ ,  $\mu = 1780^\circ$ ,  $\nu = 1790^\circ$ ,  $\xi = 1800^\circ$ ,  $\omicron = 1810^\circ$ ,  $\pi = 1820^\circ$ ,  $\rho = 1830^\circ$ ,  $\sigma = 1840^\circ$ ,  $\tau = 1850^\circ$ ,  $\upsilon = 1860^\circ$ ,  $\phi = 1870^\circ$ ,  $\chi = 1880^\circ$ ,  $\psi = 1890^\circ$ ,  $\omega = 1900^\circ$ ,  $\kappa = 1910^\circ$ ,  $\lambda = 1920^\circ$ ,  $\mu = 1930^\circ$ ,  $\nu = 1940^\circ$ ,  $\xi = 1950^\circ$ ,  $\omicron = 1960^\circ$ ,  $\pi = 1970^\circ$ ,  $\rho = 1980^\circ$ ,  $\sigma = 1990^\circ$ ,  $\tau = 2000^\circ$ ,  $\upsilon = 2010^\circ$ ,  $\phi = 2020^\circ$ ,  $\chi = 2030^\circ$ ,  $\psi = 2040^\circ$ ,  $\omega = 2050^\circ$ ,  $\kappa = 2060^\circ$ ,  $\lambda = 2070^\circ$ ,  $\mu = 2080^\circ$ ,  $\nu = 2090^\circ$ ,  $\xi = 2100^\circ$ ,  $\omicron = 2110^\circ$ ,  $\pi = 2120^\circ$ ,  $\rho = 2130^\circ$ ,  $\sigma = 2140^\circ$ ,  $\tau = 2150^\circ$ ,  $\upsilon = 2160^\circ$ ,  $\phi = 2170^\circ$ ,  $\chi = 2180^\circ$ ,  $\psi = 2190^\circ$ ,  $\omega = 2200^\circ$ ,  $\kappa = 2210^\circ$ ,  $\lambda = 2220^\circ$ ,  $\mu = 2230^\circ$ ,  $\nu = 2240^\circ$ ,  $\xi = 2250^\circ$ ,  $\omicron = 2260^\circ$ ,  $\pi = 2270^\circ$ ,  $\rho = 2280^\circ$ ,  $\sigma = 2290^\circ$ ,  $\tau = 2300^\circ$ ,  $\upsilon = 2310^\circ$ ,  $\phi = 2320^\circ$ ,  $\chi = 2330^\circ$ ,  $\psi = 2340^\circ$ ,  $\omega = 2350^\circ$ ,  $\kappa = 2360^\circ$ ,  $\lambda = 2370^\circ$ ,  $\mu = 2380^\circ$ ,  $\nu = 2390^\circ$ ,  $\xi = 2400^\circ$ ,  $\omicron = 2410^\circ$ ,  $\pi = 2420^\circ$ ,  $\rho = 2430^\circ$ ,  $\sigma = 2440^\circ$ ,  $\tau = 2450^\circ$ ,  $\upsilon = 2460^\circ$ ,  $\phi = 2470^\circ$ ,  $\chi = 2480^\circ$ ,  $\psi = 2490^\circ$ ,  $\omega = 2500^\circ$ ,  $\kappa = 2510^\circ$ ,  $\lambda = 2520^\circ$ ,  $\mu = 2530^\circ$ ,  $\nu = 2540^\circ$ ,  $\xi = 2550^\circ$ ,  $\omicron = 2560^\circ$ ,  $\pi = 2570^\circ$ ,  $\rho = 2580^\circ$ ,  $\sigma = 2590^\circ$ ,  $\tau = 2600^\circ$ ,  $\upsilon = 2610^\circ$ ,  $\phi = 2620^\circ$ ,  $\chi = 2630^\circ$ ,  $\psi = 2640^\circ$ ,  $\omega = 2650^\circ$ ,  $\kappa = 2660^\circ$ ,  $\lambda = 2670^\circ$ ,  $\mu = 2680^\circ$ ,  $\nu = 2690^\circ$ ,  $\xi = 2700^\circ$ ,  $\omicron = 2710^\circ$ ,  $\pi = 2720^\circ$ ,  $\rho = 2730^\circ$ ,  $\sigma = 2740^\circ$ ,  $\tau = 2750^\circ$ ,  $\upsilon = 2760^\circ$ ,  $\phi =$

$$J_{\alpha}^{\pm}(\partial\Omega) = \{u \in W^{1,2}(\Omega) : u|_{\partial\Omega} \in J_{\alpha}^{\pm}(\partial\Omega)\}.$$

## HERACLITUS

- [illegible]

On 7/20/07, my request is off and off, using time Area 1

1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 26

- 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 26

19. 34                      8, 14, 24

and

- It is important to note that the  $\beta$  values for the  $\beta$  and  $\gamma$  bands are not significantly different from each other, indicating that the  $\beta$  and  $\gamma$  bands are of the same type. This is in contrast to the results of other workers, who have found that the  $\beta$  and  $\gamma$  bands are of different types. For example, in the case of the  $\beta$  and  $\gamma$  bands of the  $\text{C}_{60}$  molecule, the  $\beta$  band is of the  $\text{E}_g$  type and the  $\gamma$  band is of the  $\text{A}_g$  type. This difference in type is due to the different symmetry of the  $\beta$  and  $\gamma$  bands. In the case of the  $\beta$  and  $\gamma$  bands of the  $\text{C}_{60}$  molecule, the  $\beta$  band is of the  $\text{E}_g$  type and the  $\gamma$  band is of the  $\text{A}_g$  type. This difference in type is due to the different symmetry of the  $\beta$  and  $\gamma$  bands.

data is missing, equal to zero and otherwise have been set

For information on any of the above, contact the following:

- Acknowledgements.** — The author thanks Dr. J. H. Brown, Jr., and Dr. R. A. Rosenblatt for their helpful comments on earlier drafts of this manuscript.

$$\frac{d}{dt} \langle \mathbf{r} \rangle = \langle \mathbf{v} \rangle = \frac{\hbar}{m} \nabla \psi^* \psi$$
Mortel et al. / *Capitalism* 111

## Meyer and Kautzman



Fig. 3. (a)

- [illegible]

where  $\mathbf{A} = \mathbf{A}(\mathbf{r})$  is the vector potential,  $\mathbf{r}$  is the position vector, and  $\mathbf{r} \cdot \nabla$  is the scalar product of the vector  $\mathbf{r}$  and the gradient operator  $\nabla$ . The vector potential  $\mathbf{A}$  is defined by the equation





## Mint of Iconium



88

- 88 *Al. folle.* — *ob.* — *rev.* — *ob.* Facing bust of Heracles (see 87) and Heracles Constantine (see 89) each wearing crown with cross, and holding gl. in r. hand; the figure of Heracles Constantine and Heracles are easily indistinguishable but the above inscription is wanted to be the same. R. Large in between with M and numerals representing the regal year; above, cross; beneath, *herakleus augustus*; below, *herakleus*. D.D. 188. B.M.C. 187-8. T. 272. R. 1. B.N. 1-2.

*Several pairs are only such as are used for the type. These are normally represented on folios of earlier issues.*

## Mint of Cyprus (Constantinople)

- 89 *Al. folle.* No legend. Heracles on *ob.*; Heracles Constantine (see 88) and the Emperor Martinian on *rev.*; each wearing crown with cross, and holding gl. in r. hand; the figure of Heracles Constantine and Martinian are easily indistinguishable but the above inscription is wanted to be the same. R. Large in between with M and numerals representing the regal year; above, cross; beneath, *herakleus augustus*; below, *herakleus*. D.D. 188. B.M.C. 187-8. T. 272. R. 1. B.N. 1-2.

*The following regal years and obverse have been noted:*

8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100



90

91

## Mint of Alexandria

- 90 *Al. folle.* — *ob.* — *rev.* — *ob.* Facing bust of Heracles (see 87) and Heracles Constantine (see 89) each wearing crown with cross, and holding gl. in r. hand; the figure of Heracles Constantine and Martinian are easily indistinguishable but the above inscription is wanted to be the same. R. Large in between with M and numerals representing the regal year; above, cross; beneath, *herakleus augustus*; below, *herakleus*. D.D. 188. B.M.C. 187-8. T. 272. R. 1. B.N. 1-2.

Fine  
LVery Fine  
L

94

95

- 94 *Al. folle.* — *ob.* — *rev.* — *ob.* Facing bust of Heracles (see 87) and Heracles Constantine (see 89) each wearing crown with cross, and holding gl. in r. hand; the figure of Heracles Constantine and Martinian are easily indistinguishable but the above inscription is wanted to be the same. R. Large in between with M and numerals representing the regal year; above, cross; beneath, *herakleus augustus*; below, *herakleus*. D.D. 188. B.M.C. 187-8. T. 272. R. 1. B.N. 1-2.

96

97

- 95 *Al. folle.* — *ob.* — *rev.* — *ob.* Facing bust of Heracles (see 87) and Heracles Constantine (see 89) each wearing crown with cross, and holding gl. in r. hand; the figure of Heracles Constantine and Martinian are easily indistinguishable but the above inscription is wanted to be the same. R. Large in between with M and numerals representing the regal year; above, cross; beneath, *herakleus augustus*; below, *herakleus*. D.D. 188. B.M.C. 187-8. T. 272. R. 1. B.N. 1-2.

98

99



100

101

- 100 *Al. folle.* — *ob.* — *rev.* — *ob.* Facing bust of Heracles (see 87) and Heracles Constantine (see 89) each wearing crown with cross, and holding gl. in r. hand; the figure of Heracles Constantine and Martinian are easily indistinguishable but the above inscription is wanted to be the same. R. Large in between with M and numerals representing the regal year; above, cross; beneath, *herakleus augustus*; below, *herakleus*. D.D. 188. B.M.C. 187-8. T. 272. R. 1. B.N. 1-2.

102

103

- 101 *Al. folle.* — *ob.* — *rev.* — *ob.* Facing bust of Heracles (see 87) and Heracles Constantine (see 89) each wearing crown with cross, and holding gl. in r. hand; the figure of Heracles Constantine and Martinian are easily indistinguishable but the above inscription is wanted to be the same. R. Large in between with M and numerals representing the regal year; above, cross; beneath, *herakleus augustus*; below, *herakleus*. D.D. 188. B.M.C. 187-8. T. 272. R. 1. B.N. 1-2.

104

105

- 859 *Æ 12 nummi.* Obv. Similar, but Heracles has long beard; between them, cross point. R. As last. D.O. 185. R.M.C.—. T.—. R.—. R.N. 56

- 860 No legend. Heracles (on recto), Heracles Cynosurus (on v.) and Heracles (on l.) all wearing chlamys and holding gl. or. in r. hand; Heracles and Heracles Cynosurus each wear crown with cross; cross in field above l. of Heracles. R. As last. D.O. 186. R.M.C. 291. T. 460. R.—. R.N. 59-61



- 861 — — R. As last, but with Minerva's head facing between them. D.O. 187. R.M.C. 298-301. T. 494-501. R. 1464-6. R.N. 62-8

- 862 *Æ 6 nummi.* [I signed usually standard or Phlegon, but sometimes as v. or l. of Heracles (as v. or l. of Heracles)]. Obv. Similar, sometimes with cross at base of arm, on base above cross (sometimes only one). R. Large & small. D.O. 188. R.M.C. 309-314. T. 118-21. R. 1325-3. R.N. 63-65

- 863 No legend. Heracles and Heracles Cynosurus facing, each wearing chlamys and crown, and holding gl. or. in r. hand; between their hands, cross. R. Large & small. D.O. 189. R.M.C. 315-316. T. 308-30. R.—. R.N. 66-67

- 864 No legend. Palm-tree with fruit. R. Large & small. D.O. 190. R.M.C. 318-319. T. 317. R.—. R.N. 70-71

- 865 *Æ 3 nummi.* Obv. As last. R. Large & small with cross to r. D.O. 191. R.M.C. 320. T.—. R.—. R.N. 80-81

Fine

8

9

10

0

14

4

12

Very Fine

## Mint of Carthage

- 866 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 192. R.M.C. 321. T. 14. R.—. R.N. 1-2

Individual years 15, 16 and 17 have been noted.

- 867 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 193. R.M.C. 322. T. 15. R.—. R.N. 3-5

Individual years 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

Very Fine

8

9

10

0

14

4

12

Very Fine



867

870

871

- 867 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 193. R.M.C. 322. T. 15. R.—. R.N. 3-5

- 870 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 194. R.M.C. 323. T. 16. R.—. R.N. 6-8

- 871 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 195. R.M.C. 324. T. 17. R.—. R.N. 9-11

- 872 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 196. R.M.C. 325. T. 18. R.—. R.N. 12-14

- 873 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 197. R.M.C. 326. T. 19. R.—. R.N. 15-17

- 874 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 198. R.M.C. 327. T. 20. R.—. R.N. 18-20

- 875 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 199. R.M.C. 328. T. 21. R.—. R.N. 21-23

- 876 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 200. R.M.C. 329. T. 22. R.—. R.N. 24-26

- 877 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 201. R.M.C. 330. T. 23. R.—. R.N. 27-29

- 878 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 202. R.M.C. 331. T. 24. R.—. R.N. 30-32

- 879 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 203. R.M.C. 332. T. 25. R.—. R.N. 33-35

- 880 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 204. R.M.C. 333. T. 26. R.—. R.N. 36-38

- 881 *Æ 10 nummi.* Obv. Similar, but head bearded. R. As last. D.O. 205. R.M.C. 334. T. 27. R.—. R.N. 39-41



874

- 859 *Al. decussatum*. — R. As P28, but the X is to r. of A, and the R to L. D.O. 246. B.M.C.— T.— R. 1170. B.N. 19. —  
 879 — Hibernia but facing, head to r. holding gl. r. R. As P27. D.O.— B.M.C.— T.— R.— B.N. 20. —  
 880 *Al. pentastemonum*. R. — caedro 10. (or similar). Hibernia but facing, headless. R. Large v. cross above on other side, ear with pollen above and beneath. D.O. 246. B.M.C.— T.— R. 1741. B.N. 21. —  
 881 *Al. nemorosus*. No legend. Diad. bust l. R. Managosa 26. D.O. 240. B.M.C.— T.— R.— B.N. —. —

## Mint in Sicily



882

- 882 *Al. fellis* (coin of Hieracius, bust l. and Hieracius Constantine, of Constantinople, as ex. 869, dated Year 21 or later, accompanied on obs. and rev. as follows): no obs. Facing busts of Hieracius (on l.), with long beard and Hieracius, and Hieracius Constantine (on r.), with short beard, each wearing crown and chlamys, cross between their heads; all within an oval punch stamped in any position on the obs. of the original coin. On rev. 362 within an oval or circular punch stamped below the M of the original coin. D.O. 240. B.M.C. 510-P5. T. 125-v. R. 1480-0. B.N. 1-26. —

Of the 59 specimens described in D.O. 240, 42 found in B.N. were described as folls of Hieracius, 26 as Ptole. I. 1 on faces and Hieracius and 23 as Hieracius.



884

885

- 884 *Al. fellis* (coin of Hieracius and Hieracius Constantine, of Constantinople, as ex. 869, dated Year 20 or 21, accompanied on obs. and rev. as follows): no obs. 362 within an oval or circular punch stamped on the lower part of the standing figure of the original coin. On rev. Facing busts of Hieracius (on l.) with short beard, and Hieracius Constantine (on r.), headless, each wearing crown and chlamys, cross between their heads; all within an oval punch stamped in any position over the upper part of the M of the original coin. D.O. 240. B.M.C. 504-07. T. 514. R. 1444. B.N. 27-32. —

Flae  
A

R

16

20

15

Flae  
C

- 884 *Al. fellis* (coin of Hieracius and Hieracius Constantine, of Constantinople, as ex. 869, dated Year 21 or later, accompanied on obs. and rev. as follows): no obs. Facing busts of Hieracius (on l.), with long beard and Hieracius, and Hieracius Constantine (on r.), with short beard, each wearing crown and chlamys, cross between their heads; all within an oval punch stamped in any position on the obs. of the original coin. On rev. Managosa 26 and 362 within an oval punch stamped in any position on the rev. of the original coin. D.O. 241. B.M.C. 508-09. T. 515. R. 1450. B.N. 35-41. —

Specimens have been sent of these coins, some showing on the reverse a full and half fall.

## Mint of Carpi

- 885 *Al. decussatum*. R. — v. 1841/1870 P. —. Covered and side, bust facing, headless, holding gl. st. and shield. R. Large I between v. 1841/1870 and numerals representing the rapid year; on rev. 143. D.O. 246. B.M.C.— T. 99. R.— B.N. p. 162. —

Rapid year in only one of the coins.



886

887

- 886 R. R. 1184/1187 P. 180. Covered, dr. and side, bust facing, headless, holding gl. st. R. As last. D.O. 246-56. B.M.C. 492-P. T. 94-101. R.— B.N. 1-6. —

The following rapid years have been noted:

88	89	90	91	92	93	94	95	96	97	98	99

88	89	90	91	92	93	94	95	96	97	98	99

- 887 No legend. Facing busts of Hieracius (on l.), headless, and Hieracius Constantine (on r.), headless, both crowned, dr. and side; cross between their heads. R. As last. D.O. 251-0. B.M.C. 499-13. T. 94-14. R.— B.N. 7-18. —

The following rapid years have been noted:

88	89	90	91	92	93	94	95	96	97	98	99

- 888 *Al. pentastemonum*. [Legend?]. Diad. bust r., headless. R. Large I between two stars; on rev. 143. D.O. 280, note. B.M.C.— T.— R.— B.N.—. —

- 889 *Al. caedro* 10. —. Bust facing, headless, wearing crown and chlamys. R. As last. D.O. 280. B.M.C.— T. 104 [from Sabini?]. R.— B.N. p. 303. —



- 905 **AE 129** *smaller quarter obolus* (c. 0.4 gm.). O. S. 1840/95 PP. 5.  
[or similar]. Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 278. B.M.C. 436. F. 59. R.—  
B.N. 17.  
906 **P. 1**, *128*, *17*, *18*. As last. R. Large Monogram  $\eta$  within wreath.  
D.O. 280. B.M.C. 440-9. T. 52. R.— B.N., p. 511.



907

910

- 907 **P. 1**, *128*, *17*, *18*. As last. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.  
908 — *11*. *128* (part) between two stars; all within wreath. D.O. 280.  
B.M.C. 437. T. 50-51. P.— B.N. 16.  
909 — *16*. As last, but with *four* stars instead of *two* stars. D.O.  
282-3. B.M.C. 440. T.— B.N. —

- 910 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 911 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 912 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 913 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 914 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 915 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 916 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 917 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 918 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 919 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 920 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 921 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 922 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 923 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.

- 924 **AE 128**, *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*. *18*, *19*, *20*.  
Head, bust n.; beardless, wearing robe. R. Large  $\alpha$ ,  
with above; all within wreath. D.O. 280. B.M.C. 436. F. 59. R.—  
B.N. 17.







## CONSTANS II

September 641-15 July 645



456

## ASSOCIATE RULERS.

**CONSTANTINE IV**, Augustus from 15 April 641.**HERACLIUS and TIBERIUS**, Augusti from 2 June 645.

The son of Heraclius Constantine, Constantine was born in 630 and was made co-emperor by Heraclius in September 641. His official name was *Constantinus, filius patris imperatoris*, abbreviated to *Constantine*.

In the early part of his reign the Arabs continued their advances against the East, Syria being captured by the end of 642. This was a great blow to the Byzantine empire in Egypt which was now permanently lost, and had been one of the richest provinces of the empire. The Arab fleet was also built up at this time and constructed a great threat to Rome and the Adriatic.

Rebels occurred in North Africa and in Italy, but they both ended in failure, and Constantine further strengthened his position by concluding the new Constantinian compromise in 644. Four years later he undertook a campaign against the Slavs on the Balkans, and achieved a considerable measure of success. Large numbers of Slavs were transported to Asia Minor, where they served in the imperial army.

Towards the end of his reign Constantine took the unprecedented step of renouncing his readiness to the West. He left Constantinople, never to return, and made a short journey through the eastern provinces, apparently not for local distribution and thus leaving the imperial capital, though the rest of his family remained in Constantinople. His departure ultimately led to his assassination in 645, as he was succeeded by his son.

## CRISTAL YEARS AND INDUCTIONS

AD	Regnal Year	Indiction
641.2	1	1
642.1	2	2
643.1	3	3
644.1	4	4
645.1	5	5
646.2	6	6
647.6	7	7
648.7	8	8
649.10	9	9
650.1	10	10
651.2	11	11
652.3	12	12
653.4	13	13
654.5	14	14
655.6	15	15
656.7	16	16
657.8	17	17
658.9	18	18
659.10	19	19
660.1	20	20

661.2	21	21
662.3	22	22
663.4	23	23
664.5	24	24
665.6	25	25
666.7	26	26
667.8	27	27

Very Fine

C

## Mint of Constantinople

- 456 *Ανδρῶν*. P. M. CONSTANTINVS PP. AVG. Bust facing, with very small head, beardless, wearing crown and *chiton*, and holding gl. or E. scepter. *ΑΥΓΑ* (followed by officina letter). Cross points on three steps. *CONSTANTINVS*. D.O. (*Constantinus*); 1. R.H.C. 1. T. 10, 14. R. — *R.N. (Heraclius)* 1.

175

Officinas 1, 6, 8, 9 and 10 have been noted.



457

458

- 457 — R. As bust, but with *CONSTANS* instead of *CONSTANTINVS*. D.O. (*Constantinus*) 2. R.H.C. 9, 10. T. 3, 9, 11. R. — *R.N. (Heraclius)* 2.

180

- 458 *ΑΥΓΑ*. Similar, but with larger head, with beardless, and the legend *ΑΥΓΑ* (slightly varied). R. As 457. D.O. 1. R.H.C. 1-5. T. 1, 4, 6, 7, 11, 14, 16. R. 100-10. R.N. 1-5, 7, 9.

181

- 459 *ΑΥΓΑ*. As 458, but with *CONSTANS* instead of *CONSTANTINVS*. D.O. 2. R.H.C. 1. T. 1, 3, 8, 12. R. — *R.N. 9-11*.

182

- 460 *ΑΥΓΑ*. As 459, but with *CONSTANS* instead of *CONSTANTINVS*. D.O. 3. R.H.C. 1. T. 1, 3, 8, 12. R. — *R.N. 9-11*.

183

- 461 *ΑΥΓΑ*. As 460, but with *CONSTANS* instead of *CONSTANTINVS*. D.O. 4. R.H.C. 1. T. 1, 3, 8, 12. R. — *R.N. 9-11*.

184

- 462 *ΑΥΓΑ*. As 461, but with *CONSTANS* instead of *CONSTANTINVS*. D.O. 5. R.H.C. 1. T. 1, 3, 8, 12. R. — *R.N. 9-11*.

185

- 463 *ΑΥΓΑ*. As 462, but with *CONSTANS* instead of *CONSTANTINVS*. D.O. 6. R.H.C. 1. T. 1, 3, 8, 12. R. — *R.N. 9-11*.

186

- 464 *ΑΥΓΑ*. As 463, but with *CONSTANS* instead of *CONSTANTINVS*. D.O. 7. R.H.C. 1. T. 1, 3, 8, 12. R. — *R.N. 9-11*.

187

- 465 *ΑΥΓΑ*. As 464, but with *CONSTANS* instead of *CONSTANTINVS*. D.O. 8. R.H.C. 1. T. 1, 3, 8, 12. R. — *R.N. 9-11*.

188

Very Fine

£

943 — *A solidus*. — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ , and with cross instead of cross. D.O. 6. R.M.C. — T. — R. — B.N. 15, 16

Officine  $\epsilon$  and  $\delta$  have been noted.

944 — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ . D.O. 7. R.M.C. 14, 15, 18. T. 20, 24, 25. R. — R.N. 17

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$  and  $\theta$  have been noted.

945 — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ , and with cross instead of cross. D.O. 8. R.M.C. — T. — R. — B.N. 18

Officine  $\epsilon$  only noted for this type.

946 — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ , and with cross instead of cross. D.O. 9. R.M.C. 16, 17, 20. R. — B.N. 19

Officine  $\epsilon$  only noted for this type.

947 — Obv. Similar, but with short beard. R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ . D.O. 12. R.M.C. 17. T. 30. R. 1538. B.N. 20

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$  and  $\theta$  have been noted.

948 — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ , and with cross instead of cross. D.O. 12. R.M.C. — T. 31. R. — B.N. 21

Officine  $\epsilon$  and  $\delta$  have been noted.



949

949 — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ . D.O. 13. R.M.C. 18-21. T. 32a. R. — B.N. 22a

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$  and  $\theta$  have been noted.

950 — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ , and with cross instead of cross. D.O. 14. R.M.C. 22. T. 33, 32, 36. R. — B.N. 23

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$  and  $\theta$  have been noted.

951 — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ . D.O. 15. R.M.C. 23. T. 34, 35, 36. R. — B.N. 24

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$  and  $\theta$  have been noted.

952 — R. As 936, but with  $\epsilon$  | Indiction 50 in field to  $\epsilon$ , and with cross instead of cross. D.O. 16. R.M.C. — T. 35. R. — B.N. 25

Officine  $\epsilon$  only noted for this type.

953 — R. As 936. D.O. 16. R.M.C. 25. T. 36, 37, 38. R. — B.N. 26-28

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$ ,  $\theta$  and  $\delta$  have been noted.

954 — R. As 936, but with cross instead of cross. D.O. 17. R.M.C. 26. T. 38. R. — B.N. 29-31

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$  and  $\theta$  have been noted.

955 — R. As 936, but with cross instead of cross. D.O. 18. R.M.C. 27. T. 39, 40, 41. R. — B.N. 32-34

Officine  $\epsilon$  and  $\delta$  have been noted.

Very Fine

£

956 — Obv. Similar, but with long beard and monastic. R. As 936. D.O. 19. R.M.C. 27, 30-31, 33a. T. 43, 45-7, 49, 50-1, 52, 53. R. 1544-5. B.N. 30-41. Illustrated on p. 136

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$ ,  $\theta$  and  $\delta$  have been noted; sometimes with  $\epsilon$  also seen instead of officina letter.

957 — R. As 936, but with cross instead of cross. D.O. 20. R.M.C. 32. T. 56. R. — B.N. 42

Officine  $\epsilon$  and  $\delta$  have been noted.

958 — R. As 936, but with cross instead of cross. D.O. 21. R.M.C. 33. T. 43, 50. R. — B.N. 43-4

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$  and  $\theta$  have been noted.



959

959 — R. As 936, but with long beard, and Constantine IV (on r.), headless, with wearing open and chlamys; between their heads, cross. R. victoria aversa. (Followed by officina letter). Cross pattern on obverse, cross between. D.O. 25. R.M.C. 34-41, 45-52. T. 213-6, 236, 238-8, 241, 244, 246, 248-9, 251-5. R. 1557-8, 1560. B.N. 45-51

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$ ,  $\theta$  and  $\delta$  have been noted.

960 — R. As 936, but with cross instead of cross. D.O. 26. R.M.C. 42. T. 235, 243, 247. R. 1559. B.N. 52

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$ ,  $\theta$  and  $\delta$  have been noted.

961 — R. As 936, but with cross instead of cross. D.O. 27. R.M.C. 43. T. 235, 242, 245. R. 1561. B.N. 53-4

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$ ,  $\theta$  and  $\delta$  have been noted.

Legend fully fragmentary. — Obv. Similar to similar. Facing busts of Constantine and Constantine IV, as 959, but Constantine wears pleated robes instead of cross. R. victoria aversa. (Followed by officina letter). Long cross on globe between facing busts, figures of Heracles (on l.) and Theseus (on r.), both headless, each wearing cross and chlamys, and holding p. — Obverse, cross. D.O. 28. R.M.C. — T. 1563, 321-4, 328. R. 1563-15. B.N. 55-1

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$ ,  $\theta$  and  $\delta$  have been noted.



962

964

962 — R. As 936, but with short officina letter. D.O. 29. R.M.C. 44. T. 246, 248, 250. R. 1560. B.N. —

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$ ,  $\theta$  and  $\delta$  have been noted.

964 — R. As 936, but with cross pattern on obverse, cross between Heracles and Theseus, instead of long cross on globe. D.O. 30. R.M.C. 45-8. T. 225, 247, 250-50, 253, 303-305, 304-5, 311-33. R. 1567-8, 1568-9. B.N. 55-63, 64

Officine  $\epsilon$ ,  $\tau$ ,  $\lambda$ ,  $\nu$ ,  $\theta$ ,  $\delta$  and  $\delta$  have been noted.

- 965 *N solidus*. — B. As last, but with a (vertically) after officina letter. D.O. 11. B.M.C. — T. — R. — B.N. — 200

Officina 9 only noted for this type.

- 966 — B. As last, but with 1 after officina letter. D.O. 12. B.M.C. — T. 285, 290, 294, 302. R. — B.N. — p. 339 180

Officinae 1, 2, 3 and 4 have been noted.

- 967 — B. As last, but with 2 or 3 (vertically) after officina letter. D.O. 15. B.M.C. 59-60. T. 288, 291, 295, 299, 303, 310. R. over. B.N. — p. 339 140

Officinae 1, 2, 3, 4, 5 and 6 have been noted.

- 968 — B. As 964, but with reverse instead of obverse. D.O. 34. B.M.C. — T. 286, 302. R. 1604. B.N. — p. 339 300

Officinae 1 and 2 have been noted.

- 969 — B. As 964, but with cross instead of obverse. D.O. 35. B.M.C. — T. 309. R. — B.N. — p. 339 240

Officina 1 only noted for this type.

- 970 — B. As 964, but with cross instead of obverse. D.O. 36. B.M.C. 63-2. T. 248, 304. R. 1603. B.N. 64-3 120

Officinae 1 and 2 have been noted.

- 971 — B. As 964, but with cross instead of obverse, and after officina letter. D.O. 37. B.M.C. — T. 303. R. — B.N. — p. 340 300

Officina 1 only noted for this type.

- 972 — B. As 964, but with reverse instead of obverse. D.O. 38. B.M.C. 63. T. 257, 310. R. — B.N. — p. 340 140

Officinae 1 and 2 have been noted.

- 973 *Victoriae aene*. (followed by obverse letter). Bust of Constant facing, with long beard and mustache, wearing chlamys and plumed helmet ornamented with cross; in r. hand, p. 4. No hybrid. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. 44. T. 310-11. R. — B.N. — p. 478 200

Officinae 1, 2, 3, 4, 5 and 6 have been noted.



973a

973b

- 974 As last, but with after officina letter on obverse. D.O. 41. B.M.C. — T. 312-3. R. — B.N. — p. 340 120

Officinae 1, 2, 3 and 4 have been noted.

- 975 As 973, but Constant's helmet is not ornamented with cross. D.O. 42. B.M.C. 65, 67-8. T. 310-11, 313-14. R. 1610. B.N. 69 200

Officinae 1, 2, 3, 4, 5, 6 and 7 have been noted.

- 976 As last, but with after officina letter on obverse. D.O. 43. B.M.C. — T. — R. 1614-15. B.N. 70 120

Officinae 1, 2, 3, 4 and 5 have been noted.

- 977 *N light weight solidus*. — 20 obols. D. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 44. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1, 2, 3, 4, 5 and 6 have been noted.



977a

977b

- 978 — B. As last, but with cross instead of obverse. D.O. 21. B.M.C. — T. — R. — B.N. — p. 340 275

Officinae 1 and 2 have been noted.

- 979 — B. *Victoriae aene*. (followed by officina letter). Cross points on three steps, with beneath. D.O. 24. B.M.C. — T. 303. R. — B.N. — p. 340 275

Officinae 1, 2, 3 and 4 have been noted.

- 980 — B. As last, but with cross instead of obverse. D.O. — B.M.C. — T. — R. — B.N. 72 120

Officina 1 only noted for this type.

- 981 *N light weight solidus*. — 20 obols. D. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 982 Legend only fragmentary. — B. 18 mm. (see note p. 180 for similar). Facing bust of Constant (on L), with long beard. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 983 Legend only fragmentary. — B. 18 mm. (see note p. 180 for similar). Facing bust of Constant (on L), with long beard. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 984 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 985 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 986 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 987 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 988 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 989 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 990 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 991 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 992 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

- 993 *N solidus*. — B. 18 mm. (see note p. 180 for similar). Bust facing, with long beard and mustache, wearing chlamys and plumed helmet. Obverse: the IV in exergue, flanked by a cross and Tiberius and solita. Reverse: each with cross and chlamys, and holding p. 4. Reverse: obverse. D.O. 41. B.M.C. — T. 310-11. B.N. — p. 340 200

Officinae 1 and 2 have been noted.

Very Fine

4

- 987 "CEREMONIAL" SILVER COINAGE. *Mellareus* or *collationes*.  
G. 4-4.5 gm. D. 18. CONSTANTINUS PP. AVG. (on obverse). Bare head,  
with very small *hel. hirsuta*, wearing crown and chlamys, and holding gl.  
cr. R. No legend. Great pellets on globe above three stars, on either  
side, palm. D.D. (Humboldt) 3. B.M.C. 28. P. 113. R. — B.N.  
(Humboldt) p. 121

- 988 Obs. Similar, but with larger *hel. hirsuta* and more beard. R. As last. D.D.  
46. B.M.C. — P. 117. R. — B.N. p. 142



987

990

- 989 Legend only fragmentary—R. — *CONSTANTINVS PP. AVG.* Facing  
head of Constantine and Constantine IV, as on 987. R. As last. D.D.  
47. B.M.C. 28. P. 118. R. — B.N. p. 142

- 989 "NORMAL" SILVER COINAGE. *Heptagram* (7 with gold). G. 1.5.  
CONSTANTINVS PP. AVG. (on obverse). Bare head, with very small  
*hel. hirsuta*, wearing crown and chlamys, and holding gl. cr. R. No  
legend. Large pellets on globe above three stars, on either  
side, palm. D.D. (Humboldt) 3. B.M.C. 28. P. 113. R. — B.N.  
(Humboldt) p. 121

- 989 Obs. Similar, but with larger *hel. hirsuta* and more beard. R. As last. D.D. 48.  
B.M.C. 28. P. 114-15. R. 143. B.N. 1

- 990 Obs. Similar, but with very slight legend, indicated by a row of dots around  
the last. R. As last. D.D. 48. B.M.C. — P. 115. R. — B.N. —



989

990

- 991 Obs. Similar, but with crown or no rounded head. R. As last. D.D.  
50. B.M.C. 28-31. P. 114-15. R. 143-4. B.N. 2

- 992 Obs. R. As last, but with a small *hel. hirsuta*. D.D. 51. B.M.C. — P. 116.  
R. — B.N. —

- 993 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
52. B.M.C. — P. 116. R. 143-4. B.N. 3

- 994 Obs. R. As last, but with a small *hel. hirsuta*. D.D. 53. B.M.C. — P. 117.  
R. — B.N. —

- 995 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
54. B.M.C. 32-33. P. 117-18. R. 144-45. B.N. 4



991

995

Very Fine

4

- 996 — R. As 988, but with *hel. hirsuta* in R. D.D. 55. B.M.C. 37.  
P. 116-17. R. 145-47

- 997 — R. As 988, but with *hel. hirsuta* in R. D.D. 56. B.M.C. 38.  
P. 118. R. 148. B.N. p. 143



996

999

- 998 Legend only fragmentary—R. — *CONSTANTINVS PP. AVG.* Facing head  
of Constantine and Constantine IV, as 987, but Constantine wears *hel. hirsuta*  
and crown. R. No legend. Large pellets on globe above three stars, on either  
side, palm. D.D. (Humboldt) 3. B.M.C. 28. P. 113. R. — B.N.  
(Humboldt) p. 121

- 999 Obs. Similar, but with larger *hel. hirsuta* and more beard. R. As last. D.D.  
48. B.M.C. — P. 117. R. — B.N. p. 142

- 1000 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
54. B.M.C. 32-33. P. 117-18. R. 144-45. B.N. 4

- 1001 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
55. B.M.C. 34-35. P. 118-19. R. 146-47. B.N. 5

- 1002 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
56. B.M.C. 36-37. P. 119-20. R. 148-49. B.N. 6

- 1003 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
57. B.M.C. 38-39. P. 120-21. R. 150-51. B.N. 7

- 1004 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
58. B.M.C. 40-41. P. 121-22. R. 152-53. B.N. 8

- 1005 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
59. B.M.C. 42-43. P. 122-23. R. 154-55. B.N. 9

- 1006 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
60. B.M.C. 44-45. P. 123-24. R. 156-57. B.N. 10

- 1007 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
61. B.M.C. 46-47. P. 124-25. R. 158-59. B.N. 11

- 1008 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
62. B.M.C. 48-49. P. 125-26. R. 160-61. B.N. 12

- 1009 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
63. B.M.C. 50-51. P. 126-27. R. 162-63. B.N. 13

- 1010 Obs. Similar, but with long beard and more beard. R. As last. D.D.  
64. B.M.C. 52-53. P. 127-28. R. 164-65. B.N. 14



1000

1001





[illegible]

Fig. 2.4

1994].

### Effect of Absorbance

[illegible]

## Mineral Leachate

10.5. *N*-antigenic carbohydrates and small molecules. 1. N. 2. K. 3. Lewis<sup>x</sup> (1977) and Lewis<sup>y</sup> (1978). 4. D. 5. A. 6. B. 7. C. 8. D. 9. E. 10. F. 11. G. 12. H. 13. I. 14. J. 15. K. 16. L. 17. M. 18. N. 19. O. 20. P. 21. Q. 22. R. 23. S. 24. T. 25. U. 26. V. 27. W. 28. X. 29. Y. 30. Z. 31. aa. 32. bb. 33. cc. 34. dd. 35. ee. 36. ff. 37. gg. 38. hh. 39. ii. 40. jj. 41. kk. 42. ll. 43. mm. 44. nn. 45. oo. 46. pp. 47. qq. 48. rr. 49. ss. 50. tt. 51. uu. 52. vv. 53. ww. 54. xx. 55. yy. 56. zz. 57. AA. 58. BB. 59. CC. 60. DD. 61. EE. 62. FF. 63. GG. 64. HH. 65. II. 66. JJ. 67. KK. 68. LL. 69. MM. 70. NN. 71. OO. 72. PP. 73. QQ. 74. RR. 75. SS. 76. TT. 77. UU. 78. VV. 79. WW. 80. XX. 81. YY. 82. ZZ. 83. AA. 84. BB. 85. CC. 86. DD. 87. EE. 88. FF. 89. GG. 90. HH. 91. II. 92. JJ. 93. KK. 94. LL. 95. MM. 96. NN. 97. OO. 98. PP. 99. QQ. 100. RR. 101. SS. 102. TT. 103. UU. 104. VV. 105. WW. 106. XX. 107. YY. 108. ZZ. 109. AA. 110. BB. 111. CC. 112. DD. 113. EE. 114. FF. 115. GG. 116. HH. 117. II. 118. JJ. 119. KK. 120. LL. 121. MM. 122. NN. 123. OO. 124. PP. 125. QQ. 126. RR. 127. SS. 128. TT. 129. UU. 130. VV. 131. WW. 132. XX. 133. YY. 134. ZZ. 135. AA. 136. BB. 137. CC. 138. DD. 139. EE. 140. FF. 141. GG. 142. HH. 143. II. 144. JJ. 145. KK. 146. LL. 147. MM. 148. NN. 149. OO. 150. PP. 151. QQ. 152. RR. 153. SS. 154. TT. 155. UU. 156. VV. 157. WW. 158. XX. 159. YY. 160. ZZ. 161. AA. 162. BB. 163. CC. 164. DD. 165. EE. 166. FF. 167. GG. 168. HH. 169. II. 170. JJ. 171. KK. 172. LL. 173. MM. 174. NN. 175. OO. 176. PP. 177. QQ. 178. RR. 179. SS. 180. TT. 181. UU. 182. VV. 183. WW. 184. XX. 185. YY. 186. ZZ. 187. AA. 188. BB. 189. CC. 190. DD. 191. EE. 192. FF. 193. GG. 194. HH. 195. II. 196. JJ. 197. KK. 198. LL. 199. MM. 200. NN. 201. OO. 202. PP. 203. QQ. 204. RR. 205. SS. 206. TT. 207. UU. 208. VV. 209. WW. 210. XX. 211. YY. 212. ZZ. 213. AA. 214. BB. 215. CC. 216. DD. 217. EE. 218. FF. 219. GG. 220. HH. 221. II. 222. JJ. 223. KK. 224. LL. 225. MM. 226. NN. 227. OO. 228. PP. 229. QQ. 230. RR. 231. SS. 232. TT. 233. UU. 234. VV. 235. WW. 236. XX. 237. YY. 238. ZZ. 239. AA. 240. BB. 241. CC. 242. DD. 243. EE. 244. FF. 245. GG. 246. HH. 247. II. 248. JJ. 249. KK. 250. LL. 251. MM. 252. NN. 253. OO. 254. PP. 255. QQ. 256. RR. 257. SS. 258. TT. 259. UU. 260. VV. 261. WW. 262. XX. 263. YY. 264. ZZ. 265. AA. 266. BB. 267. CC. 268. DD. 269. EE. 270. FF. 271. GG. 272. HH. 273. II. 274. JJ. 275. KK. 276. LL. 277. MM. 278. NN. 279. OO. 280. PP. 281. QQ. 282. RR. 283. SS. 284. TT. 285. UU. 286. VV. 287. WW. 288. XX. 289. YY. 290. ZZ. 291. AA. 292. BB. 293. CC. 294. DD. 295. EE. 296. FF. 297. GG. 298. HH. 299. II. 300. JJ. 301. KK. 302. LL. 303. MM. 304. NN. 305. OO. 306. PP. 307. QQ. 308. RR. 309. SS. 310. TT. 311. UU. 312. VV. 313. WW. 314. XX. 315. YY. 316. ZZ. 317. AA. 318. BB. 319. CC. 320. DD. 321. EE. 322. FF. 323. GG. 324. HH. 325. II. 326. JJ. 327. KK. 328. LL. 329. MM. 330. NN. 331. OO. 332. PP. 333. QQ. 334. RR. 335. SS. 336. TT. 337. UU. 338. VV. 339. WW. 340. XX. 341. YY. 342. ZZ. 343. AA. 344. BB. 345. CC. 346. DD. 347. EE. 348. FF. 349. GG. 350. HH. 351. II. 352. JJ. 353. KK. 354. LL. 355. MM. 356. NN. 357. OO. 358. PP. 359. QQ. 360. RR. 361. SS. 362. TT. 363. UU. 364. VV. 365. WW. 366. XX. 367. YY. 368. ZZ. 369. AA. 370. BB. 371. CC. 372. DD. 373. EE. 374. FF. 375. GG. 376. HH. 377. II. 378. JJ. 379. KK. 380. LL. 381. MM. 382. NN. 383. OO. 384. PP. 385. QQ. 386. RR. 387. SS. 388. TT. 389. UU. 390. VV. 391. WW. 392. XX. 393. YY. 394. ZZ. 395. AA. 396. BB. 397. CC. 398. DD. 399. EE. 400. FF. 401. GG. 402. HH. 403. II. 404. JJ. 405. KK. 406. LL. 407. MM. 408. NN. 409. OO. 410. PP. 411. QQ. 412. RR. 413. SS. 414. TT. 415. UU. 416. VV. 417. WW. 418. XX. 419. YY. 420. ZZ. 421. AA. 422. BB. 423. CC. 424. DD. 425. EE. 426. FF. 427. GG. 428. HH. 429. II. 430. JJ. 431. KK. 432. LL. 433. MM. 434. NN. 435. OO. 436. PP. 437. QQ. 438. RR. 439. SS. 440. TT. 441. UU. 442. VV. 443. WW. 444. XX. 445. YY. 446. ZZ. 447. AA. 448. BB. 449. CC. 450. DD. 451. EE. 452. FF. 453. GG. 454. HH. 455. II. 456. JJ. 457. KK. 458. LL. 459. MM. 460. NN. 461. OO. 462. PP. 463. QQ. 464. RR. 465. SS. 466. TT. 467. UU. 468. VV. 469. WW. 470. XX. 471. YY. 472. ZZ. 473. AA. 474. BB. 475. CC. 476. DD. 477. EE. 478. FF. 479. GG. 480. HH. 481. II. 482. JJ. 483. KK. 484. LL. 485. MM. 486. NN. 487. OO. 488. PP. 489. QQ. 490. RR. 491. SS. 492. TT. 493. UU. 494. VV. 495. WW. 496. XX. 497. YY. 498. ZZ. 499. AA. 500. BB. 501. CC. 502. DD. 503. EE. 504. FF. 505. GG. 506. HH. 507. II. 508. JJ. 509. KK. 510. LL. 511. MM. 512. NN. 513. OO. 514. PP. 515. QQ. 516. RR. 517. SS. 518. TT. 519. UU. 520. VV. 521. WW. 522. XX. 523. YY. 524. ZZ. 525. AA. 526. BB. 527. CC. 528. DD. 529. EE. 530. FF. 531. GG. 532. HH. 533. II. 534. JJ. 535. KK. 536. LL. 537. MM. 538. NN. 539. OO. 540. PP. 541. QQ. 542. RR. 543. SS. 544. TT. 545. UU. 546. VV. 547. WW. 548. XX. 549. YY. 550. ZZ. 551. AA. 552. BB. 553. CC. 554. DD. 555. EE. 556. FF. 557. GG. 558. HH. 559. II. 560. JJ. 561. KK. 562. LL. 563. MM. 564. NN. 565. OO. 566. PP. 567. QQ. 568. RR. 569. SS. 570. TT. 571. UU. 572. VV. 573. WW. 574. XX. 575. YY. 576. ZZ. 577. AA. 578. BB. 579. CC. 580. DD. 581. EE. 582. FF. 583. GG. 584. HH. 585. II. 586. JJ. 587. KK. 588. LL. 589. MM. 590. NN. 591. OO.

		Very Fine	
		£	
1700	— = II. As last, cross patent on three steps, cross beneath, in field		
1701	As P. 2. D.O. 106. R.A.C. — T. — R. — R.N. 3-4	200	
1702	— = II. As last, cross patent on two steps, cross beneath, in field		
1703	As P. 2. D.O. 106. R.A.C. — T. — R. 1519. R.N. p. 751	250	
1704	— = II. As last, cross patent on three steps, cross beneath, in field		
1705	As P. 2. D.O. 110. R.A.C. 268. T. 67. R. — R.N. p. 751	250	
1706	— = II. As last, cross patent on three steps, cross beneath, in field		
1707	As P. 2. D.O. 316. R.A.C. 268. T. 61. R. 1513. R.N. p. 751	250	
1708	— = II. As last, cross patent on three steps, cross beneath, in field		
1709	As P. 2. D.O. 112. R.A.C. — T. — R. — R.N. p. 350	250	
1710	As P. 2. D.O. 1029. As last, cross patent on three steps, cross beneath, in field		
1711	As P. 2. D.O. 115. R.A.C. 270. T. 69-75. R. 1519. R.N. p. 351-2	200	
1712	— = II. As last, cross patent on three steps, cross beneath, in field		
1713	As P. 2. D.O. 116. R.A.C. — T. 71. R. — R.N. p. 352	250	
1714	As P. 2. D.O. 117. R.A.C. — T. 72. R. — R.N. p. 352	250	
1715	As P. 2. D.O. 118. R.A.C. — T. 73. R. — R.N. p. 352	250	
1716	As P. 2. D.O. 119. R.A.C. — T. 74. R. — R.N. p. 352	250	
1717	As P. 2. D.O. 120. R.A.C. — T. 75. R. — R.N. p. 352	250	
1718	As P. 2. D.O. 121. R.A.C. — T. 76. R. — R.N. p. 352	250	
1719	As P. 2. D.O. 122. R.A.C. — T. 77. R. — R.N. p. 352	250	
1720	As P. 2. D.O. 123. R.A.C. — T. 78. R. — R.N. p. 352	250	
1721	As P. 2. D.O. 124. R.A.C. — T. 79. R. — R.N. p. 352	250	
1722	As P. 2. D.O. 125. R.A.C. — T. 80. R. — R.N. p. 352	250	
1723	As P. 2. D.O. 126. R.A.C. — T. 81. R. — R.N. p. 352	250	
1724	As P. 2. D.O. 127. R.A.C. — T. 82. R. — R.N. p. 352	250	
1725	As P. 2. D.O. 128. R.A.C. — T. 83. R. — R.N. p. 352	250	
1726	As P. 2. D.O. 129. R.A.C. — T. 84. R. — R.N. p. 352	250	
1727	As P. 2. D.O. 130. R.A.C. — T. 85. R. — R.N. p. 352	250	
1728	As P. 2. D.O. 131. R.A.C. — T. 86. R. — R.N. p. 352	250	
1729	As P. 2. D.O. 132. R.A.C. — T. 87. R. — R.N. p. 352	250	
1730	As P. 2. D.O. 133. R.A.C. — T. 88. R. — R.N. p. 352	250	
1731	As P. 2. D.O. 134. R.A.C. — T. 89. R. — R.N. p. 352	250	
1732	As P. 2. D.O. 135. R.A.C. — T. 90. R. — R.N. p. 352	250	
1733	As P. 2. D.O. 136. R.A.C. — T. 91. R. — R.N. p. 352	250	
1734	As P. 2. D.O. 137. R.A.C. — T. 92. R. — R.N. p. 352	250	
1735	As P. 2. D.O. 138. R.A.C. — T. 93. R. — R.N. p. 352	250	
1736	As P. 2. D.O. 139. R.A.C. — T. 94. R. — R.N. p. 352	250	
1737	As P. 2. D.O. 140. R.A.C. — T. 95. R. — R.N. p. 352	250	
1738	As P. 2. D.O. 141. R.A.C. — T. 96. R. — R.N. p. 352	250	
1739	As P. 2. D.O. 142. R.A.C. — T. 97. R. — R.N. p. 352	250	
1740	As P. 2. D.O. 143. R.A.C. — T. 98. R. — R.N. p. 352	250	
1741	As P. 2. D.O. 144. R.A.C. — T. 99. R. — R.N. p. 352	250	
1742	As P. 2. D.O. 145. R.A.C. — T. 100. R. — R.N. p. 352	250	
1743	As P. 2. D.O. 146. R.A.C. — T. 101. R. — R.N. p. 352	250	
1744	As P. 2. D.O. 147. R.A.C. — T. 102. R. — R.N. p. 352	250	
1745	As P. 2. D.O. 148. R.A.C. — T. 103. R. — R.N. p. 352	250	
1746	As P. 2. D.O. 149. R.A.C. — T. 104. R. — R.N. p. 352	250	
1747	As P. 2. D.O. 150. R.A.C. — T. 105. R. — R.N. p. 352	250	
1748	As P. 2. D.O. 151. R.A.C. — T. 106. R. — R.N. p. 352	250	
1749	As P. 2. D.O. 152. R.A.C. — T. 107. R. — R.N. p. 352	250	
1750	As P. 2. D.O. 153. R.A.C. — T. 108. R. — R.N. p. 352	250	
1751	As P. 2. D.O. 154. R.A.C. — T. 109. R. — R.N. p. 352	250	
1752	As P. 2. D.O. 155. R.A.C. — T. 110. R. — R.N. p. 352	250	
1753	As P. 2. D.O. 156. R.A.C. — T. 111. R. — R.N. p. 352	250	
1754	As P. 2. D.O. 157. R.A.C. — T. 112. R. — R.N. p. 352	250	
1755	As P. 2. D.O. 158. R.A.C. — T. 113. R. — R.N. p. 352	250	
1756	As P. 2. D.O. 159. R.A.C. — T. 114. R. — R.N. p. 352	250	
1757	As P. 2. D.O. 160. R.A.C. — T. 115. R. — R.N. p. 352	250	
1758	As P. 2. D.O. 161. R.A.C. — T. 116. R. — R.N. p. 352	250	
1759	As P. 2. D.O. 162. R.A.C. — T. 117. R. — R.N. p. 352	250	

Each week of course has been used to bring down material



14.10.2009

56	1. $R = R_1$ but also with $P$ in field in $l$ . 1949, 117, R.131	58	
57	2. $P \in R_1$ R.139, R.139		
	Indicates $\pi$ has $\pi$ field for the log.		
58	1. $g, d$ rate important. $g, d$ "constant, not similar". 1949, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890		





Type  
A

Mint of Syracuse

Very Fine  
F

- 1054 R. half follis. R. S. CONSTANS II. (see center). Bust facing, with short beard, wearing crown and chlamys (not holding gl. or p.). R. Large R, with cross to left and is to right. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This type of coinage occurred on half follis of the reign of 1055 (overminted, see center). Bust facing, with short beard, wearing crown and chlamys with right arm raised in a hand, holding a p. or a l. — L. Large, cross dividing a p. below and a p. above, with cross, star between two pellets. D.D. 145. R.M.A. — 20. 12. R. 201. 16. R. 1577-8. R.N. 38-41.

There are no clearly overminted on half follis of the reign of 1055 and 1056; instead, coins overminted with 1055 and 1056.

- 1056 R. As 1056, but the crown is ornamented with a p. instead of a star. L. As 1056, but the p. is below the star and is instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

R. As 1056, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

- 1057 Legend very fragmentary, but some, perhaps, faintly visible. R. As 1057, but the crown is ornamented with a p. instead of a star. L. As 1057, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.



1052



1053



1054



1055



1056

- 1058 R. As 1058, but the crown is ornamented with a p. instead of a star. L. As 1058, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1059 R. As 1059, but the crown is ornamented with a p. instead of a star. L. As 1059, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1060 R. As 1060, but the crown is ornamented with a p. instead of a star. L. As 1060, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1061 R. As 1061, but the crown is ornamented with a p. instead of a star. L. As 1061, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1062 R. As 1062, but the crown is ornamented with a p. instead of a star. L. As 1062, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1063 R. As 1063, but the crown is ornamented with a p. instead of a star. L. As 1063, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1064 R. As 1064, but the crown is ornamented with a p. instead of a star. L. As 1064, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.



1065



1066

- 1067 R. As 1067, but the crown is ornamented with a p. instead of a star. L. As 1067, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1068 R. As 1068, but the crown is ornamented with a p. instead of a star. L. As 1068, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1069 R. As 1069, but the crown is ornamented with a p. instead of a star. L. As 1069, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1070 R. As 1070, but the crown is ornamented with a p. instead of a star. L. As 1070, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1071 R. As 1071, but the crown is ornamented with a p. instead of a star. L. As 1071, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.

- 1072 R. As 1072, but the crown is ornamented with a p. instead of a star. L. As 1072, but the crown is ornamented with a p. instead of a star. D.D. 145. R.M.A. — 7. — R. — R.N., p. 79.

This coin is overminted on half follis of the reign of 1055 and 1056.









- 1103 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
"CEREMONIAL" SILVER COINAGE. Milligrams 12.15-13.1 grs.  
... ..  
1104 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..  
1105 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1106 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..  
1107 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1108 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..  
1109 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1110 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1111 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..



1111

- 1112 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1113 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1114 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1115 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1116 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1117 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..



- 1118 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1119 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..


- 1120 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..



- 1121 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1122 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

- 1123 *1/2* half tressis. P. R. 1841. . . . .  
D.D. 18. R.M.C. = T. 18. R. = R.N. 18. 1841.  
... ..

		Plate		Very Fine	
1881	<i>Al. half fulla</i> . — Type in 1875 in field vol. 9. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1891	— — (speller in field vol. 6). <i>L. .5 mm. cross .08 mm. representing the very of the inscription in a globe. R. 10 — 10.511 — V. — R. — R.N. 11.</i> <i>This is a very rare type.</i>	225
			1892	— — (speller in field vol. 6). <i>L. .5 mm. cross .08 mm. representing the very of the inscription in a globe. R. 10 — 10.511 — V. — R. — R.N. 11.</i> <i>This is a very rare type.</i>	225
1892	<i>Al. doranumion</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1893	<i>Al. half fulla</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	225
1893	<i>Al. doranumion</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1894	<i>Al. half fulla</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	225
1894	<i>Al. doranumion</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1895	<i>Al. half fulla</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	225
1895	<i>Al. doranumion</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1896	<i>Al. half fulla</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	225
1896	<i>Al. doranumion</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1897	<i>Al. half fulla</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	225
1897	<i>Al. doranumion</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1898	<i>Al. half fulla</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	225
1898	<i>Al. doranumion</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1899	<i>Al. half fulla</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	225
1899	<i>Al. doranumion</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	95	1900	<i>Al. half fulla</i> . No legend. Type in 1875. <i>L. Long. 1.5 mm. W. .5 mm. cross .10-12. 2.302-2.548. V. 131. R. 155-166. R.N. 9-11.</i> <i>This type is common in unmarked lots. September 15.</i>	225









Very Fine  
£

1210

- 1207 *Aureus*. — *Obv.* AV 1207, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.  
*Opposite to the hole is a hole in the metal.*

- 1208 *Aureus*. — *Obv.* AV 1208, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.  
*Opposite to the hole is a hole in the metal.*

- 1209 *Aureus*. — *Obv.* AV 1209, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

*Opposite to the hole is a hole in the metal.*



1210

1211

- 1210 *Aureus*. — *Obv.* AV 1210, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.  
*Opposite to the hole is a hole in the metal.*

- 1211 *Aureus*. — *Obv.* AV 1211, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.  
*Opposite to the hole is a hole in the metal.*

- 1212 *Aureus*. — *Obv.* AV 1212, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1213 *Aureus*. — *Obv.* AV 1213, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1214 *Aureus*. — *Obv.* AV 1214, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

Very Fine  
£

1215

1216

- 1215 *Aureus*. — *Obv.* AV 1215, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1216 *Aureus*. — *Obv.* AV 1216, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1217 *Aureus*. — *Obv.* AV 1217, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1218 *Aureus*. — *Obv.* AV 1218, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1219 *Aureus*. — *Obv.* AV 1219, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1220 *Aureus*. — *Obv.* AV 1220, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1221 *Aureus*. — *Obv.* AV 1221, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1222 *Aureus*. — *Obv.* AV 1222, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1223 *Aureus*. — *Obv.* AV 1223, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1224 *Aureus*. — *Obv.* AV 1224, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1225 *Aureus*. — *Obv.* AV 1225, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1226 *Aureus*. — *Obv.* AV 1226, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1227 *Aureus*. — *Obv.* AV 1227, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1228 *Aureus*. — *Obv.* AV 1228, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1229 *Aureus*. — *Obv.* AV 1229, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1230 *Aureus*. — *Obv.* AV 1230, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1231 *Aureus*. — *Obv.* AV 1231, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

Fine



1232

- 1232 *Aureus*. — *Obv.* AV 1232, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1233 *Aureus*. — *Obv.* AV 1233, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.























- 1234 *Aureus*. — *Obv.* AV 1234, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1235 *Aureus*. — *Obv.* AV 1235, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.

- 1236 *Aureus*. — *Obv.* AV 1236, right half cut off by a hole in the metal.  
D.M.C. 9-10. T. 2.5, 3.4, 11-12. R. 1899. D.M.C.





		Face		Vary Fine
1904	<i>AE follis</i> . — Justinian, bearded, enthroned facing, wearing crown and chlamys, and holding globe and scepter; field with cross. — Reverse: Large $\Sigma$ between two palms; above, <i>MONETARIO</i> 50, in ex. on. — <i>RIC</i> , 69, <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415. <i>This type has been used somewhat in falsification up to 1905.</i>	 		
1905	<i>AE half follis</i> . No legend. Head facing, with short beard, wearing crown and chlamys, and holding globe. — Reverse: Large $\Sigma$ between $\alpha$ and $\omega$ ([P]) above; <i>MONETARIO</i> 50, below. — <i>RIC</i> , 69. <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415. <i>This has been used extensively in falsification up to 1905.</i>	 		
<b>Mint of Naples</b>				
1906	<i>AE half follis</i> . Inscribed: <i>N</i> . Head facing, bearded, wearing crown and chlamys, and holding globe. — Reverse: $\Sigma$ between $\alpha$ and $\omega$ ([P]) above; <i>MON</i> , below. — <i>RIC</i> , 69. <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415.	 		
1907	<i>AE half follis</i> . Inscribed: <i>N</i> . Head facing, bearded, wearing crown and chlamys, and holding globe. — Reverse: $\Sigma$ between $\alpha$ and $\omega$ ([P]) above; <i>MON</i> , below. — <i>RIC</i> , 69. <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415. <i>This half follis was used in falsification up to 1905.</i>	 		
<b>Mint of Rome</b>				
1908	<i>AE quarter siliqua</i> . No legend. Head facing, bearded, wearing crown and chlamys, and holding globe. — Reverse: Large $\Sigma$ between $\alpha$ and $\omega$ ([P]) above; <i>MON</i> , below. — <i>RIC</i> , 69. <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415.	 		
1909	<i>AE short-quarter follis</i> . No legend. Head facing, bearded, wearing crown and chlamys, and holding globe. — Reverse: Large $\Sigma$ between $\alpha$ and $\omega$ ([P]) above; <i>MON</i> , below. — <i>RIC</i> , 69. <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415. <i>This short-quarter follis was used in falsification up to 1905.</i>	 		
<b>Mint of Ravenna</b>				
1910	<i>AE follis</i> . No legend. Head facing, with short beard, wearing crown and chlamys, and holding globe. — Reverse: Large $\Sigma$ between $\alpha$ and $\omega$ ([P]) above; <i>MON</i> , below. — <i>RIC</i> , 69. <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415.	 		
<b>Uncertain Italian Mints</b>				
   				
1911	<i>AE siliqua</i> . No legend. Head facing, bearded, wearing crown and chlamys, and holding globe. — Reverse: Large $\Sigma$ between $\alpha$ and $\omega$ ([P]) above; <i>MON</i> , below. — <i>RIC</i> , 69. <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415.	 		
1912	<i>AE siliqua</i> . No legend. Head facing, bearded, wearing crown and chlamys, and holding globe. — Reverse: Large $\Sigma$ between $\alpha$ and $\omega$ ([P]) above; <i>MON</i> , below. — <i>RIC</i> , 69. <i>AE</i> , 10. T. 96. R. =. <i>J.N.</i> , p. 415.	 		

## Very Fine

- 1127 *A tremula*. D. H. (obverse) p. 47. Bust facing, beardless (A), with very small head, wearing crown and diadem, and holding gl. st. B. VICTORIA AVITA, (sometimes followed by . . .) C. 270. Crowned, rostral helmet. DIA. 42 and 44. B.M. 29. *Constantinople*, undated. T. 46. —. B.N. —.
- 1128 D. H. (obverse), c. 47. (or sometimes beardless form). Same type, but with short head, and larger head. A. VICTORIA AVITA, (sometimes followed by . . .) C. 270. Crowned, rostral helmet. DIA. 44 and 46. B.M. 29. T. 44-54, 57. B.N. 10. *Rome*, c. 300-310 P. 47. Type as last, but the head and crown "frankish" shape, with crown but no gl. st. B. VICTORIA AVITA. Crowned, rostral helmet. DIA. 44, B.M. 42. *Constantinople*, c. 51. B.N. —.

## LEONTIUS

p. 195, line 10.



p. 111

The progress of the Hellenic cause, Leontius led a successful revolt against Justin II in 560. The Arabs took advantage of the change in government to attack the Byzantine possessions in North Africa, and after a protracted struggle Carthage was finally lost in 568. *Leontius* is a scholastic against Leontius' reign, and Apollonius, the deacon of the church of Constantinople, was involved in the revolt. Leontius is a possible coin and mentioned in the text.

## FISCAL YEARS AND INDUCTIONS

A.D.	Fiscal Year	Indiction
559-60	1	9
560-1	2	10
561-2	3	11

N.B. ANTHEMUS, c. 47 and B. 48, referent are to the change of the calendar of Leo III, to whom these years were formerly attributed.



154

Very Fine

## Mint of Constantinople

1. *Leontius*. D. H. (obverse) p. 47. Bust facing, bearded, wearing crown and diadem. A. VICTORIA AVITA, (sometimes followed by . . .) C. 270. Crowned, rostral helmet. DIA. 44 and 46. B.M. 29. T. 44-54, 57. B.N. 10. *Rome*, c. 300-310 P. 47. Type as last, but the head and crown "frankish" shape, with crown but no gl. st. B. VICTORIA AVITA. Crowned, rostral helmet. DIA. 44, B.M. 42. *Constantinople*, c. 51. B.N. —.
2. *Leontius*. D. H. (obverse) p. 47. Bust facing, bearded, wearing crown and diadem. A. VICTORIA AVITA, (sometimes followed by . . .) C. 270. Crowned, rostral helmet. DIA. 44 and 46. B.M. 29. T. 44-54, 57. B.N. 10. *Rome*, c. 300-310 P. 47. Type as last, but the head and crown "frankish" shape, with crown but no gl. st. B. VICTORIA AVITA. Crowned, rostral helmet. DIA. 44, B.M. 42. *Constantinople*, c. 51. B.N. —.



1734

1735

Face

- 1734 *W. folles*. Obs. As 1732, broken on surface and left. A large *W* between a *W* and *N* (and hence diamond) and some other characters, possibly, but not certainly, of the same origin. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

*These are the only seals of the same type found in the collection.*

- 1735 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

*The folles are found in the collection of the same type.*

*These are the only seals of the same type found in the collection.*

- 1736 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

*The folles are found in the collection of the same type.*

#### Mint of Naples



1738

1739

- 1738 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

*The folles are found in the collection of the same type.*

- N.B. A folles of the same type found in the collection of the same type.

#### Mint of Naples

- 1739 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

*The folles are found in the collection of the same type.*



1740

1741

Very Fine

- 1740 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1741 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1742 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1743 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- N.B. A folles of the same type found in the collection of the same type.

- 1744 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1745 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

#### Mint of Naples

Very Fine

- 1746 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1747 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1748 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1749 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1750 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1751 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.

- 1752 *W. half folles*. No legend. Large *W* left. A large *W* between a *W* and *N* and a large *W* between a *W* and *N*. (1734, 1735, 1736, 1737) *R.N.*, p. 105.











1411

Very Fine  
A

1415 *A solidus*. — D. As 140, but the figure of Diocletian is larger, almost the same size as life natural. *D.M.* 36. *R.M.* 1. 1. 2. *A.* 1795. *R.N.* 12-13.

1416 *A aurelianus*. 186. As 1417. R. As 1418, but Julianian holds cross potent on globe instead of eagle. *D.M.* 3. *R.M.* 1. *A.* 1795. *R.N.* 6.

1417 — R. As 1414, but they hold between their cross potent on globe instead of eagle. *D.M.* 46. *R.M.* 5. *A.* 1795. *R.N.* 430.

1418 — R. As 1419, but they hold between their cross potent on globe instead of eagle. *D.M.* 46. *R.M.* 5. *A.* 1795. *R.N.* 430.

1419 *A tremula*. 186. As 1413 (though usually as 1414). R. As 1414, but Julianian holds cross potent on globe instead of eagle. *D.M.* 5. *R.M.* 26. *A.* 1795. *R.N.* 9.

1420 — R. As 1414, but they hold between their cross potent on globe instead of eagle. *D.M.* 46. *R.M.* 5. *A.* 1795. *R.N.* 430.

1421 — R. As 1418, but they hold between their cross potent on globe instead of eagle. *D.M.* 46. *R.M.* 5. *A.* 1795. *R.N.* 430.

1422 *A quarter solidus*. 1. 1. 1. 40. 186. As 1411. R. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1423 *A tremula*. As 1411 (though usually as 1414). *D.M.* 5. *R.M.* 26. *A.* 1795. *R.N.* 9.

1424 *A quarter solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1425 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1426 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1427 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1428 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1429 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1430 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1431 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1432 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1433 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1434 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1435 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1436 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1437 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.



1429

1432

1429 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1432 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1433 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1434 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1435 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1436 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1437 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1438 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1439 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1440 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1441 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1442 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1443 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1444 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1445 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1446 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1447 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1448 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1449 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1450 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1451 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1452 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1453 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

1454 — R. As 1428, but without the cross beneath the date numeral. *D.M.* 11. *R.M.* 1. *A.* 1795. *R.N.* 2.

Plate  
6

Very Fine

Minor in Series

1455 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1456 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1457 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1458 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1459 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1460 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1461 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1462 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.

1463 *A solidus*. 1. 1. 1. 40. 186. As 1411. *D.M.* 7. *R.M.* 1. *A.* 1795. *R.N.* 430.







Very Fine  
L

- 1477 *A. tremula* (obverse metal). — *W. ANASTAS.* Same type. R. same.  
As. *Asas* cross potent, cross beneath, in field to *ca* left. D.D. D.  
A.M.C. 18. T. 30. R. —. R.N. p. 491. . . . . 475

## Mint of Rome

- 1478 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 476



1478

- 1479 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 477

- 1480 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 478

- 1481 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 479

- 1482 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 480

## Mint of Ravenna

- 1483 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 481

- 1484 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 482

- 1485 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 483

- 1486 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 484

- 1487 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 485

THEODOSIUS III  
of Aedemium

Number 715-54 July 757



1487

A simple reverse, with no indication of obverse for affairs of state. The reverse  
used in Constantinople for only two years before he was supplanted by the emperor  
Constantine, son of the above-mentioned.

Very Fine  
L

## Mint of Constantinople

- 1488 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 486

- 1489 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 487

- 1490 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 488

- 1491 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 489

- 1492 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 490

- 1493 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 491

- 1494 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 492

- 1495 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 493

- 1496 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 494

- 1497 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 495

- 1498 *A. solidus*. — *W. ANASTAS.* Same type. R. same. In field to *ca* left  
shaded, much to left. R. *ANASTAS* in field by 12 A with three  
pallies above, placed vertically. Cross potent on three steps, cross be-  
neath in field to *ca* left. D.D. —. D.M.C. T. —. R. —. R.N. 1. . . . . 496



Very Poor

1

5477 *H. tremulae* (detected overall). D. 2447611. Same type. S. 10728  
as. Signal 1 and 2 present. Cores 100% female in both to r., also. D. 12. 20  
R. 1417. 14. T. 20. R. . D. 5. 2. 441.

## Zellars and Kautner

[illegible]

1573

[illegible]

(1) Let  $\alpha = \frac{1}{2}(\sqrt{5}-1)$ ,  $\beta = \frac{1}{2}(\sqrt{5}+1)$ . Then  $\alpha$  and  $\beta$  are roots of the equation  $x^2 + x - 1 = 0$ . It follows that  $\alpha^n + \beta^n$  is an integer for all  $n \in \mathbb{N}$ .

[illegible][illegible]

### Statistical Analysis

1. If  $K$  is infinite, then  $\mathcal{H}(K)$  is a Hilbert space with norm  $\|x\|_2 = (\sum_{i=1}^{\infty} |x_i|^2)^{1/2}$ . If  $K$  is finite, then  $\mathcal{H}(K)$  is a Hilbert space with norm  $\|x\|_2 = (\sum_{i=1}^{|K|} |x_i|^2)^{1/2}$ . If  $K$  is finite, then  $\mathcal{H}(K)$  is a Hilbert space with norm  $\|x\|_2 = (\sum_{i=1}^{|K|} |x_i|^2)^{1/2}$ .

[10] A. Krasovskiy, *Stability of motion*, Moscow: Fizmatgiz, 1959.

113. S. W. SHERMAN, *et al.*, *Synopsis*, *Int. J. Cancer*, **3**, 102 (1969).

THEODOSIUS III  
of Aedaniyrium.

February 2015/24 Rule 7.17



142

\* Levels are official, with no indication or advice as to the effect of stress. Theoretical levels are not necessarily for use by the user before the test is applied by the project.

### Model of Constant Income

[illegible]

†  $\phi$  must be 0,  $\pi$ ,  $2\pi$ , and is here assumed to be 0.

100. A semisimple algebra  $A$  is called *split* if  $A \cong M_n(F)$  for some  $n$  and  $F$  a field.

$$H_0: \beta = 0 \quad H_1: \beta \neq 0$$

2. 解: 解法一: 由题设知,  $\lim_{x \rightarrow 0} \frac{f(x)}{x} = 1$ , 故  $\lim_{x \rightarrow 0} \frac{f(x)}{x^2} = \lim_{x \rightarrow 0} \frac{1}{x} = \infty$ , 故  $\lim_{x \rightarrow 0} \frac{f(x)}{x^2} = \infty$ .

## 1. wie

8. Tiedtke, J. (1992). *Die deutsche Literatur des 19. Jahrhunderts*. München: C.H. Beck.

*Received* 10 May 1987; *accepted* 16 July 1987.

[illegible]

Mean of Symptom

## Mardi at Seawall

1. A. A. Kiselev, *Uchenye Zapiski Kazanskogo Universiteta*, 21: 2 (1929), 121; *ibid.*, 22: 1 (1930), 121; *ibid.*, 23: 1 (1931), 121; *ibid.*, 24: 1 (1932), 121; *ibid.*, 25: 1 (1933), 121; *ibid.*, 26: 1 (1934), 121; *ibid.*, 27: 1 (1935), 121; *ibid.*, 28: 1 (1936), 121; *ibid.*, 29: 1 (1937), 121; *ibid.*, 30: 1 (1938), 121; *ibid.*, 31: 1 (1939), 121; *ibid.*, 32: 1 (1940), 121; *ibid.*, 33: 1 (1941), 121; *ibid.*, 34: 1 (1942), 121; *ibid.*, 35: 1 (1943), 121; *ibid.*, 36: 1 (1944), 121; *ibid.*, 37: 1 (1945), 121; *ibid.*, 38: 1 (1946), 121; *ibid.*, 39: 1 (1947), 121; *ibid.*, 40: 1 (1948), 121; *ibid.*, 41: 1 (1949), 121; *ibid.*, 42: 1 (1950), 121; *ibid.*, 43: 1 (1951), 121; *ibid.*, 44: 1 (1952), 121; *ibid.*, 45: 1 (1953), 121; *ibid.*, 46: 1 (1954), 121; *ibid.*, 47: 1 (1955), 121; *ibid.*, 48: 1 (1956), 121; *ibid.*, 49: 1 (1957), 121; *ibid.*, 50: 1 (1958), 121; *ibid.*, 51: 1 (1959), 121; *ibid.*, 52: 1 (1960), 121; *ibid.*, 53: 1 (1961), 121; *ibid.*, 54: 1 (1962), 121; *ibid.*, 55: 1 (1963), 121; *ibid.*, 56: 1 (1964), 121; *ibid.*, 57: 1 (1965), 121; *ibid.*, 58: 1 (1966), 121; *ibid.*, 59: 1 (1967), 121; *ibid.*, 60: 1 (1968), 121; *ibid.*, 61: 1 (1969), 121; *ibid.*, 62: 1 (1970), 121; *ibid.*, 63: 1 (1971), 121; *ibid.*, 64: 1 (1972), 121; *ibid.*, 65: 1 (1973), 121; *ibid.*, 66: 1 (1974), 121; *ibid.*, 67: 1 (1975), 121; *ibid.*, 68: 1 (1976), 121; *ibid.*, 69: 1 (1977), 121; *ibid.*, 70: 1 (1978), 121; *ibid.*, 71: 1 (1979), 121; *ibid.*, 72: 1 (1980), 121; *ibid.*, 73: 1 (1981), 121; *ibid.*, 74: 1 (1982), 121; *ibid.*, 75: 1 (1983), 121; *ibid.*, 76: 1 (1984), 121; *ibid.*, 77: 1 (1985), 121; *ibid.*, 78: 1 (1986), 121; *ibid.*, 79: 1 (1987), 121; *ibid.*, 80: 1 (1988), 121; *ibid.*, 81: 1 (1989), 121; *ibid.*, 82: 1 (1990), 121; *ibid.*, 83: 1 (1991), 121; *ibid.*, 84: 1 (1992), 121; *ibid.*, 85: 1 (1993), 121; *ibid.*, 86: 1 (1994), 121; *ibid.*, 87: 1 (1995), 121; *ibid.*, 88: 1 (1996), 121; *ibid.*, 89: 1 (1997), 121; *ibid.*, 90: 1 (1998), 121; *ibid.*, 91: 1 (1999), 121; *ibid.*, 92: 1 (2000), 121; *ibid.*, 93: 1 (2001), 121; *ibid.*, 94: 1 (2002), 121; *ibid.*, 95: 1 (2003), 121; *ibid.*, 96: 1 (2004), 121; *ibid.*, 97: 1 (2005), 121; *ibid.*, 98: 1 (2006), 121; *ibid.*, 99: 1 (2007), 121; *ibid.*, 100: 1 (2008), 121; *ibid.*, 101: 1 (2009), 121; *ibid.*, 102: 1 (2010), 121; *ibid.*, 103: 1 (2011), 121; *ibid.*, 104: 1 (2012), 121; *ibid.*, 105: 1 (2013), 121; *ibid.*, 106: 1 (2014), 121; *ibid.*, 107: 1 (2015), 121; *ibid.*, 108: 1 (2016), 121; *ibid.*, 109: 1 (2017), 121; *ibid.*, 110: 1 (2018), 121; *ibid.*, 111: 1 (2019), 121; *ibid.*, 112: 1 (2020), 121; *ibid.*, 113: 1 (2021), 121; *ibid.*, 114: 1 (2022), 121; *ibid.*, 115: 1 (2023), 121; *ibid.*, 116: 1 (2024), 121; *ibid.*, 117: 1 (2025), 121; *ibid.*, 118: 1 (2026), 121; *ibid.*, 119: 1 (2027), 121; *ibid.*, 120: 1 (2028), 121; *ibid.*, 121: 1 (2029), 121; *ibid.*, 122: 1 (2030), 121; *ibid.*, 123: 1 (2031), 121; *ibid.*, 124: 1 (2032), 121; *ibid.*, 125: 1 (2033), 121; *ibid.*, 126: 1 (2034), 121; *ibid.*, 127: 1 (2035), 121; *ibid.*, 128: 1 (2036), 121; *ibid.*, 129: 1 (2037), 121; *ibid.*, 130: 1 (2038), 121; *ibid.*, 131: 1 (2039), 121; *ibid.*, 132: 1 (2040), 121; *ibid.*, 133: 1 (2041), 121; *ibid.*, 134: 1 (2042), 121; *ibid.*, 135: 1 (2043), 121; *ibid.*, 136: 1 (2044), 121; *ibid.*, 137: 1 (2045), 121; *ibid.*, 138: 1 (2046), 121; *ibid.*, 139: 1 (2047), 121; *ibid.*, 140: 1 (2048), 121; *ibid.*, 141: 1 (2049), 121; *ibid.*, 142: 1 (2050), 121; *ibid.*, 143: 1 (2051), 121; *ibid.*, 144: 1 (2052), 121; *ibid.*, 145: 1 (2053), 121; *ibid.*, 146: 1 (2054), 121; *ibid.*, 147: 1 (2055), 121; *ibid.*, 148: 1 (2056), 121; *ibid.*, 149: 1 (2057), 121; *ibid.*, 150: 1 (2058), 121; *ibid.*, 151: 1 (2059), 121; *ibid.*, 152: 1 (2060), 121; *ibid.*, 153: 1 (2061), 121; *ibid.*, 154: 1 (2062), 121; *ibid.*, 155: 1 (2063), 121; *ibid.*, 156: 1 (2064), 121; *ibid.*, 157: 1 (2065), 121; *ibid.*, 158: 1 (2066), 121; *ibid.*, 159: 1 (2067), 121; *ibid.*, 160: 1 (2068), 121; *ibid.*, 161: 1 (2069), 121; *ibid.*, 162: 1 (2070), 121; *ibid.*, 163: 1 (2071), 121; *ibid.*, 164: 1 (2072), 121; *ibid.*, 165: 1 (2073), 121; *ibid.*, 166: 1 (2074), 121; *ibid.*, 167: 1 (2075), 121; *ibid.*, 168: 1 (2076), 121; *ibid.*, 169: 1 (2077), 121; *ibid.*, 170: 1 (2078), 121; *ibid.*, 171: 1 (2079), 121; *ibid.*, 172: 1 (2080), 121; *ibid.*, 173: 1 (2081), 121; *ibid.*, 174: 1 (2082), 121; *ibid.*, 175: 1 (2083), 121; *ibid.*, 176: 1 (2084), 121; *ibid.*, 177: 1 (2085), 121; *ibid.*, 178: 1 (2086), 121; *ibid.*, 179: 1 (2087), 121; *ibid.*, 180: 1 (2088







Scott, Peter



- [illegible]

Consistent Italian Studies

- [illegible]

## ARTAV &amp; SMIS

Fig. 3.  $10^3 \Delta T_{\text{eff}}^{\text{max}}$  versus  $\Delta T_{\text{eff}}^{\text{max}}$  for  $\Delta T_{\text{eff}}^{\text{max}} = 100$  and  $1000$  K.



## 2004年12月10日 星期五 11:11:11

## SILYPIHOLIS

2. A JH was conducted by the Army of Somalia in 1992, which had been requested in confidence in 1989. It was a major effort and, as a result, however, the data collected is mostly the 1970s, during the 1970s, and the period of civil strife in the government of Siyad Barre. The findings of this JH are not clear, but it is a valuable report for the country. It is also clear that the JH was not a success, and that the data collected is mostly the 1970s, during the 1970s, and the period of civil strife in the government of Siyad Barre.

Stress and Coping

- E. A. solidus*. — Larva slender, red. Hair long, well-shag, head  
— wing (10-12 mm). Matures, and for long period, as a brown fly.



- [illegible]











CONSTANTINE VE  
and IRENE

\* by e-mail: r.742@u.washington.edu



1544

The death of the 19-year-old daughter of the deceased, who was the only child of her young son, was a great loss to the family. The deceased was a very kind and generous person, and his death was a great loss to the community. The family is very grateful for the sympathy and support of their friends and neighbors during this time of mourning. The funeral will be held on Monday, June 10, at 10:00 a.m. at the funeral home of the deceased. The burial will be in the cemetery of the deceased. The family is very grateful for the sympathy and support of their friends and neighbors during this time of mourning. The funeral will be held on Monday, June 10, at 10:00 a.m. at the funeral home of the deceased. The burial will be in the cemetery of the deceased.

In the same way, it follows from Lemma 3.1 that the following conditions are equivalent:

### Effect of Temperature



100

Sept. 1, 1990

[illegible][illegible][illegible]

4. Conclusions

E 415a

*A. fella*. No. *exempl.* Type as 1941. H. Facing bases of Loe III, Loe IV and Loe V, each covering crown and chin (two of y = 0, two plates on 1 and 2, and 3); all above a horizontal fur, beneath which bases of antennae and 3 beneath  $m_2$  s. R.A. 1 : 0.511.  $\frac{H}{A_1} = 1.0$ .  $\frac{R}{A_1} = 0.511$ .

$$\lim_{\lambda \rightarrow 0} \frac{f(\lambda x) - f(x)}{\lambda} = f'(x) \quad \text{for } x \in \mathbb{R}^n.$$

See also: Page no. 1994. G. Huang, *Topol. of Characteristic*, Vol. 1, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670

Plan 2

4

10

3

# IRENE

Before 810, Byzantine 797-810 October 802



100

For the first time in the history of the Empire the throne was occupied by a woman exercising power. In her own right, and the experience was a dismal failure. She attempted her popularity by making generous gifts and reducing taxes, but she simply impoverished the State and further weakened the resources the Byzantines were able to draw upon.

Both the Arabs, and the powerful Abbassid Caliph, and the Bulgarians, who were victorious at the battle of the Marston, while the West was engaged in the struggle, the Arabs and the Bulgarians in Christian, then left.

From 810, Irene was forced to defend the throne, and in 812, she was forced to flee the throne, and in 813, she was forced to flee the throne.

## Mint of Constantinople

Very Poor



100

100 A solidus, struck in 810, showing Irene, with the inscription 'IRENE' and the date '810'.

100 A solidus, struck in 810, showing Irene, with the inscription 'IRENE' and the date '810'.

## Mint of Syracuse

100 A solidus, struck in 810, showing Irene, with the inscription 'IRENE' and the date '810'.

100 A solidus, struck in 810, showing Irene, with the inscription 'IRENE' and the date '810'.

# NICEPHORUS I

Before 810, Byzantine 810-811



100

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

## Mint of Constantinople

Very Poor

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.



100

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

100 A solidus, struck in 810, showing Nicephorus I, with the inscription 'NICEPHORUS' and the date '810'.

Year

A



1000

1000 A. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

1000 B. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

Year

A

Mint of Syracuse

1000 A. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

1000 B. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

1000 C. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

Year

A

1000 A. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.



1000

1000 A. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

Fine

C

1000 B. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

1000 C. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

1000 D. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

A

Very Fine

Mint of Naples



1000

1000 A. Gold, 18 mm. obverse, Noëlephronis I, Emperor, facing left, and reverse, cross, benediction. *W.S.* 1, p. 57, 23, 7; *W.S.* 2, p. 25, 192.

A



# LEO V, the Armenian

11 July 813 to 25 December 817



Fig. 1

LEO V

299

## ASSOCIATE RULER

CONSTANTINE, Augustus, 11 July 813 to 25 December 817

Struck at the Constantinian mint, he replaced the emperor Leo V as emperor of the Byzantine Empire and as Augustus of the Empire of the East. He was a young man, appointed Augustus by the Byzantine army under the leadership of the army of the East. He was the son of the emperor Leo V. The emperor Constantine was a young man, appointed Augustus by the Byzantine army under the leadership of the army of the East. He was the son of the emperor Leo V. The emperor Constantine was a young man, appointed Augustus by the Byzantine army under the leadership of the army of the East. He was the son of the emperor Leo V.

## Mint of Constantinople

Very Fine

1. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.



Fig. 2

Fig. 3

2. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

3. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

4. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

5. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

## Mint of Syracuse

Very Fine

1. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.



Fig. 4

2. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

3. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

4. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

5. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.



Fig. 5

6. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

7. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.

8. **A solidus**, 1.00 gram, 17.5 mm. Obverse: Leo V, facing right, wearing crown and holding scepter. Reverse: Christ Pantocrator, seated on throne, holding book and scepter. Inscriptions: 'IC XC' at top, 'PANTOCRA' at bottom.



## Very Poor

- 1047 *M. tremula* fairly struck on very small, thick flange. Reverse is, or was. Same type. R. inscrip. as *miccaus* or *miccaus* or *miccaus* (but for similar). Facing bust of Theophilus, beardless, wearing crown and diadem, and holding cross potent. R.N. =. R.M. 17-20. P. 19-20. R. = .
- 1048 reverse as. Same type. R. 104911 is. As last, but the mint mark in field not. R.N. 2<sup>nd</sup> (under cross) or 10411. R.M. 17-20. P. =. R. = .
- 1049 reverse as *miccaus* is. Same type. R. 104911. or inscrip. as *miccaus* is (or similar). Type is 1049, but wearing horns instead of diadems. R.N. 4. R.M. 15-20. P. 17. R. = .

fine



1049

- 1050 *M. bellus*. reverse as 1049, but diadems. Facing bust of Michael II. Theophilus is, or is 1042, but mint mark between their heads. R. large *M*, cross above, a banner. R.N. 1-11. P. 11-11. P. 12. P. 27-11. R. 1049 is .

This type has been found on the island of Sicily, where it is said to be of Michael II.

## THEOPHILUS

Small Argenteus 2 Dec 461 - 29 Jan 462



1051

## ASSOCIATE MINTS:

LEONANTINI, Argenteus from 1 June 460 to 1 July

MESENE, IL, Argenteus from 1 September 461

Other PREROGATIVES represented on the obverse.

THEOPHILUS, wife of Theophilus

THEOPHILUS

THEOPHILUS

THEOPHILUS

THEOPHILUS

daughters of Theophilus

The reverse is his father. Theophilus was a highly cultured man with strong sympathies for the arts. It was during this reign that the last persecution of the *pagani* took place, but it is now too remote to be the subject of serious study. Theophilus was a man of great power and influence, and his reign was marked by a number of important events. Theophilus was a man of great power and influence, and his reign was marked by a number of important events. Theophilus was a man of great power and influence, and his reign was marked by a number of important events.

Theophilus was a man of great power and influence, and his reign was marked by a number of important events. Theophilus was a man of great power and influence, and his reign was marked by a number of important events. Theophilus was a man of great power and influence, and his reign was marked by a number of important events. Theophilus was a man of great power and influence, and his reign was marked by a number of important events. Theophilus was a man of great power and influence, and his reign was marked by a number of important events.

Theophilus died of dysentery early in 462 and was succeeded by his son Michael II. Michael II, however, did not rule for long.

Very Fine

## Mint of Constantinople



1052

A gold coin, or *solidus*, or *aureus* (sometimes 1/2 gold) from the mint of Constantinople. It is facing with the head, wearing crown and diadem, and holding cross potent. R. = . R.M. 17-20. P. 19-20. R. = .

1053 reverse as 1052. Facing bust of Michael II (the emperor), wearing diadem with short beard (not L) and Constantinian cross on the forehead. R. = . R.M. 17-20. P. 19-20. R. = .

1054 reverse as 1052. Facing bust of Michael II (the emperor), wearing diadem with short beard (not L) and Constantinian cross on the forehead. R. = . R.M. 17-20. P. 19-20. R. = .

1055 reverse as 1052. Facing bust of Michael II (the emperor), wearing diadem with short beard (not L) and Constantinian cross on the forehead. R. = . R.M. 17-20. P. 19-20. R. = .

1056 reverse as 1052. Facing bust of Michael II (the emperor), wearing diadem with short beard (not L) and Constantinian cross on the forehead. R. = . R.M. 17-20. P. 19-20. R. = .



1658

*A. adrian.* *arg. hemionus*. Facing half-length figure of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads. *A. arg. hemionus*. Facing bust of Anna (on left) and Adrian (on right), each wearing crown and holding scepter between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*

1659

*A. adrian.* *arg. hemionus*. Facing bust of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*

1660

*A. adrian.* *arg. hemionus*. Facing bust of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*

1661

*A. adrian.* *arg. hemionus*. Facing bust of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*

1662

*A. adrian.* *arg. hemionus*. Facing bust of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*



1663

1664

1663

*A. adrian.* *arg. hemionus*. Facing bust of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*

1664

*A. adrian.* *arg. hemionus*. Facing bust of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*

1665

*A. adrian.* *arg. hemionus*. Facing bust of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*



1666

1667

1666

*A. adrian.* *arg. hemionus*. Facing bust of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*



1668

*A. adrian.* *arg. hemionus*. Facing half-length figure of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*



1669

*A. adrian.* *arg. hemionus*. Facing half-length figure of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*



1670

*A. adrian.* *arg. hemionus*. Facing half-length figure of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*

*A. adrian.* *arg. hemionus*. Facing half-length figure of Theophilos (in center), Theophilos I, and Theodora (on the right) seated on thrones and holding scepters, while the emperor and empress stand between their heads cross. *B.N. 11. J.M.C. p. 124. 3. 44. R.*









Very Fine

- 1715 *A. acuminata*. Large, but with a few *cr.* spots beyond. *P.N.* 171522  
10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100



1715

1717

## Series of Chemon

Fair

- 1716 *A.* 1715 and 1717. *P.N.* 171523. Large, but with a few *cr.* spots beyond. *P.N.* 171523. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100
- 1717 *A.* 1715 and 1716. *P.N.* 171524. Large, but with a few *cr.* spots beyond. *P.N.* 171524. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100
- 1718 Same, but with a few *cr.* spots beyond. *P.N.* 171525. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100
- 1719 *A.* 1715 and 1716. *P.N.* 171526. Large, but with a few *cr.* spots beyond. *P.N.* 171526. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

## Series of Provincial Mint



1720

1721

- 1720 *A.* 1715 and 1716. *P.N.* 171527. Large, but with a few *cr.* spots beyond. *P.N.* 171527. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100
- 1721 *A.* 1715 and 1716. *P.N.* 171528. Large, but with a few *cr.* spots beyond. *P.N.* 171528. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1722 *A.* 1715 and 1716. *P.N.* 171529. Large, but with a few *cr.* spots beyond. *P.N.* 171529. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

LIB VI.  
the Wine

1723 *A.* 1715 and 1716. *P.N.* 171530. Large, but with a few *cr.* spots beyond. *P.N.* 171530. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100



1723

1724 *A.* 1715 and 1716. *P.N.* 171531. Large, but with a few *cr.* spots beyond. *P.N.* 171531. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1725 *A.* 1715 and 1716. *P.N.* 171532. Large, but with a few *cr.* spots beyond. *P.N.* 171532. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1726 *A.* 1715 and 1716. *P.N.* 171533. Large, but with a few *cr.* spots beyond. *P.N.* 171533. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1727 *A.* 1715 and 1716. *P.N.* 171534. Large, but with a few *cr.* spots beyond. *P.N.* 171534. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1728 *A.* 1715 and 1716. *P.N.* 171535. Large, but with a few *cr.* spots beyond. *P.N.* 171535. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1729 *A.* 1715 and 1716. *P.N.* 171536. Large, but with a few *cr.* spots beyond. *P.N.* 171536. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1730 *A.* 1715 and 1716. *P.N.* 171537. Large, but with a few *cr.* spots beyond. *P.N.* 171537. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

## Series of Constantinople

Very Fine

1731 *A.* 1715 and 1716. *P.N.* 171538. Large, but with a few *cr.* spots beyond. *P.N.* 171538. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1732 *A.* 1715 and 1716. *P.N.* 171539. Large, but with a few *cr.* spots beyond. *P.N.* 171539. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1733 *A.* 1715 and 1716. *P.N.* 171540. Large, but with a few *cr.* spots beyond. *P.N.* 171540. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1734 *A.* 1715 and 1716. *P.N.* 171541. Large, but with a few *cr.* spots beyond. *P.N.* 171541. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1735 *A.* 1715 and 1716. *P.N.* 171542. Large, but with a few *cr.* spots beyond. *P.N.* 171542. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1736 *A.* 1715 and 1716. *P.N.* 171543. Large, but with a few *cr.* spots beyond. *P.N.* 171543. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1737 *A.* 1715 and 1716. *P.N.* 171544. Large, but with a few *cr.* spots beyond. *P.N.* 171544. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1738 *A.* 1715 and 1716. *P.N.* 171545. Large, but with a few *cr.* spots beyond. *P.N.* 171545. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1739 *A.* 1715 and 1716. *P.N.* 171546. Large, but with a few *cr.* spots beyond. *P.N.* 171546. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1740 *A.* 1715 and 1716. *P.N.* 171547. Large, but with a few *cr.* spots beyond. *P.N.* 171547. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1741 *A.* 1715 and 1716. *P.N.* 171548. Large, but with a few *cr.* spots beyond. *P.N.* 171548. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100

1742 *A.* 1715 and 1716. *P.N.* 171549. Large, but with a few *cr.* spots beyond. *P.N.* 171549. 10-32. 7.5 gr. 14, 9.5 diam. 11. *R.* 100



1.10.  $\frac{d\alpha}{dt}$  не имеет нулей (и не бесконечна),  $\frac{d\alpha}{dt} \neq 0$  и  $\frac{d\alpha}{dt} \neq \infty$  в  $P \cup \Delta$ .



## Mint of Constantinople

- 1140 *A solidus*. — The obverse is identical with 1139. Christ enthroned facing, wearing globe or palleum and colobium, and raising r. hand in benediction; in l. hand, scepter (scepter). R. — Constantine VII, beardless (see 1139) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton, while Romanus is clad in hose. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1141 *A solidus*. — The obverse is identical with 1140. Christ enthroned facing, wearing crown and hose, and holding r. scepter; in l. hand, scepter cross. R. — Constantine VII, beardless (see 1140) and Romanus I, both crowned and holding between them long patriarchal cross. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.* — (London: 1845). *Revue Numism.*

- 1142 *Aureus*. — Similar, but without the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1140) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1143 *A solidus*. — Similar to 1142, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1142) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1144 *A solidus*. — Similar to 1143, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1143) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*



1141

- 1145 *A solidus*. — Similar to 1144, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1144) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1146 *A solidus*. — Similar to 1145, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1145) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1147 *A solidus*. — The obverse is identical with 1146. Christ enthroned facing, wearing globe or palleum and colobium, and raising r. hand in benediction; in l. hand, scepter (scepter). R. — Constantine VII, beardless (see 1146) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton, while Romanus is clad in hose. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1148 *A solidus*. — Similar to 1147, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1147) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*



1149



1151



- 1149 *A solidus*. — Similar to 1148, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1148) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1150 *A solidus*. — Similar to 1149, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1149) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1151 *A solidus*. — Similar to 1150, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1150) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1152 *A solidus*. — Similar to 1151, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1151) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1153 *A solidus*. — Similar to 1152, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1152) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*

- 1154 *A solidus*. — Similar to 1153, but with the scepter and the scepter cross, replaced with ornamented with palleum. R. — Constantine VII, beardless (see 1153) and Romanus I, both crowned and holding between them long patriarchal cross; Constantine wears chiton and hose, while Romanus wears crown and hose, and holds scepter and chiton. — *R.N.*, p. 596. *B.M.C.*, p. 595. *R.*



1759

1760

1759. *Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*
1760. *Genet. pectus* on three steps. Facing bust of *Romanus I*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*

1759. *Genet. pectus* on three steps. Facing bust of *Romanus I*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*

*Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*



1761

1762

1761. *Genet. pectus* on three steps. Facing bust of *Romanus I*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*

1762. *Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*



1763

1764

1763. *Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*
1764. *Genet. pectus* on three steps. Facing bust of *Romanus I*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*

1763. *Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*

*Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*



1765

1766

1765. *Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*

1766. *Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*

#### Notes on Coins

1. *Ob. millaresimo.*  $\Sigma$ . Facing bust of *Constantine VII*, wearing crown and cross, and holding orb and scepter. *R.* (1) *Genet.* *ANNO DOMINI MCCLXXII* on four lines. *R.N.*, 26.30. *H.M.C.*, 4.13. *A. 10000.*

## ROMANUS II

Senior Emperor 9 November 959-15 March 963

- 1764 **M.** Large  $\frac{1}{2}$  B. Cross flanking on two steps, in field on L. and on R. *R.N.* 1-3. *B.M.C.* 30.51. *R.* 1596/50.  
 1765 — B. Large  $\frac{1}{2}$ . *R.N.* p. 576. *B.M.C.* p. 457 num. *R.* —  
 1766 Facing bust of Romanus I, wearing crown and beard. *R.* — p. 226. *R.N.* p. 576. *B.M.C.* —. *R.* —  
 1767 Monogram  $\Phi$ . L. Monogram  $\Phi$ . *R.N.* p. 574. *B.M.C.* (Romanus II), p. 466. *R.* —  
 1768 Monogram  $\Phi$ . L. As 1764. *R.N.* p. 574. *B.M.C.* —. *R.* —  
 1769 Facing bust of Romanus I, wearing crown and beard. *R.N.* 1, 2, 3, 4. *R.* —  
 B. Facing bust of Christopher, wearing crown and scepter. *R.N.* 5, 6, 7, 8. *R.* —  
 1770 Large  $\frac{1}{2}$  B. *R.* As 1764. *R.N.* p. 576. *B.M.C.*  $\Phi$  3. *R.* —  
 1771 Facing bust of Constantine VIII, wearing crown and scepter. *R.* —  
 Large  $\frac{1}{2}$  B. *R.N.* 1-8. *B.M.C.*  $\Phi$  3. 1944



1772

- 1772a Medallion  $\frac{1}{2}$  B. Monogram  $\Phi$ . *R.N.* 13-15. *B.M.C.* —. *R.* —  
 1940

Fior  
L

14

20

33

3

2

4

3

4

3

3

ASSOCIATE RULERS:

BASEL II, crowned April 960

neither represented on

CONSTANTINE VIII, crowned April 963 } the obverse.

The son of Constantine VII was an excellent ruler, though great deeds were done in his name. Romanus among others was the conqueror of Crete by the future emperor Nicephorus. Finally, and the most general idea captured the emperor's Arab stronghold of Tripoli in Syria.

Romanus was completely under the spell of his beautiful wife Theophano who bore him a son, the future emperor Basil II and Constantine VIII. He died after little more than three years' rule and at the age of only twenty-four.

## Mint of Constantinople

- 1. A solidus.** (as the  $\frac{1}{2}$  B. of CONSTANTINE) Bust of Christ facing, wearing nimbus, i.e. with three pellets in each limb of cross, palladium and scepter, and holding a book in behestion; in L. hand, book of Gospels. *R.* — *R.N.* — *B.M.C.* — *R.* — Letters very distinctly engraved. *R.* — Facing, bearded, wearing crown and holding an ornamental cross, and holding globe surmounted by long cross in L. hand. *R.N.* — p. 580. *B.M.C.* —. *R.* — (*Phocasius Daler*) —. *Parsons* —

- 2. Solidus.** (as the  $\frac{1}{2}$  B. of CONSTANTINE) Bust of Christ facing, wearing nimbus, i.e. with three pellets in each limb of cross, palladium and scepter, and holding a book in behestion; in L. hand, book of Gospels. *R.N.* — p. 580. *B.M.C.* —. *R.* — (*Phocasius Daler*) —. *Parsons* —

## Mint of I. Bebebe



1773

- 1. A solidus.** (as the  $\frac{1}{2}$  B. of CONSTANTINE) Bust of Christ facing, wearing nimbus, i.e. with three pellets in each limb of cross, palladium and scepter, and holding a book in behestion; in L. hand, book of Gospels. *R.N.* — p. 580. *B.M.C.* —. *R.* — (*Phocasius Daler*) —. *Parsons* —

Fior  
L

20



## JOHN I TZIMISCES

11 December 974-10 January 976



1790

## ASSOCIATE RULERS:

## BASIL II

## CONSTANTINE VIII

in co-empress throughout the reign  
 (but not represented on the coinage).

A *journal of one greater year than his predecessor*, John Tzimiskes achieved much in his comparatively short career of power. The great Russian prince Sviatoslav, once and avowed ally of Basil, died at the battle of Mesembria. He was now threatening Constantinople itself, but John, completely adept in adversity, in a brilliant campaign in 971, turning his attention to the fact he considerably extended his predecessor's conquests and reached so far as Trebizond, though he did not take Jerusalem itself. The conquered cities were all purified and Byzantine power in the Near East was greater than it had been at any time since the early part of the seventh century.

Unfortunately the emperor contracted typhoid and died early in 976 following a visit to Constantinople. The Emperor Theophanes had been banished from the court at the beginning of the reign because of his opposition to Sviatoslav's invasion, but he returned to their imperial palace and here, in 976, wrote and signed the *deposition* of his grandson.

The reign was the commencement of the *dynasty* known as the *Comneni*, and there was no lack of energy, the name and person of John I, in contrast to that of his son, for almost a hundred years.

## Mint of Constantinople

Aurei, Basil

- 1789 A *statueron* (aureus) (c. 4.50 gm.). — 1789.30. 30 x 20 mm. (1.18 in.). Obverse: laureate head of Christ facing, wearing a crown and holding a scepter. Reverse: laureate head of John I facing left, wearing a crown and holding a scepter. The coins are inscribed with 'IOHANNES' and 'PATER'.

- 1790 — R. As before, but with both sides showing the Virgin Mary seated on a globe, holding the Christ Child on her lap. The coins are inscribed with 'IOHANNES' and 'PATER'.



1791

- 1792 — R. As before, but with both sides showing the Virgin Mary seated on a globe, holding the Christ Child on her lap. The coins are inscribed with 'IOHANNES' and 'PATER'.

- 1793 — R. As before, but with both sides showing the Virgin Mary seated on a globe, holding the Christ Child on her lap. The coins are inscribed with 'IOHANNES' and 'PATER'.

## Very Fine

L

- 1789 A *statueron* (aureus) (c. 4.50 gm.). — 1789.30. 30 x 20 mm. (1.18 in.). Obverse: laureate head of Christ facing, wearing a crown and holding a scepter. Reverse: laureate head of John I facing left, wearing a crown and holding a scepter. The coins are inscribed with 'IOHANNES' and 'PATER'.

- 1790 — R. As before, but with both sides showing the Virgin Mary seated on a globe, holding the Christ Child on her lap. The coins are inscribed with 'IOHANNES' and 'PATER'.

- 1791 — R. As before, but with both sides showing the Virgin Mary seated on a globe, holding the Christ Child on her lap. The coins are inscribed with 'IOHANNES' and 'PATER'.

- 1792 — R. As before, but with both sides showing the Virgin Mary seated on a globe, holding the Christ Child on her lap. The coins are inscribed with 'IOHANNES' and 'PATER'.

- 1793 — R. As before, but with both sides showing the Virgin Mary seated on a globe, holding the Christ Child on her lap. The coins are inscribed with 'IOHANNES' and 'PATER'.

## Mint of Ezeran

June



1794

- 1794 — R. As before, but with both sides showing the Virgin Mary seated on a globe, holding the Christ Child on her lap. The coins are inscribed with 'IOHANNES' and 'PATER'.

L



Very Fine

- 1891 *AE millesimos*. Small aureus size. Engraved with legend on four steps; triple border ornamented with eight equally spaced globules. Obv. - BASIL II. CONSTANTIN. - REVEREND. - STICUS BASIL. - CONSTANTIN. - R. - five lines. - Reverse and obverse, triple border, as obv. B.N. p. 309. R.M.C. no. 1100. (Thompson Catalogue). . . . .



- 1892 *AE millesimos*. Reverse of the Virgin seated, holding the Christ child on her lap. The legend is as follows: - BASIL II. CONSTANTIN. - REVEREND. - STICUS BASIL. - CONSTANTIN. - R. - five lines. - Reverse and obverse, triple border. B.N. p. 309. R.M.C. no. 1101. (Thompson Catalogue). . . . .

- 1893 *AE millesimos*. Reverse of the Virgin seated, holding the Christ child on her lap. The legend is as follows: - BASIL II. CONSTANTIN. - REVEREND. - STICUS BASIL. - CONSTANTIN. - R. - five lines. - Reverse and obverse, triple border. B.N. p. 309. R.M.C. no. 1102. (Thompson Catalogue). . . . .

- 1894 *AE millesimos*. Reverse of the Virgin seated, holding the Christ child on her lap. The legend is as follows: - BASIL II. CONSTANTIN. - REVEREND. - STICUS BASIL. - CONSTANTIN. - R. - five lines. - Reverse and obverse, triple border. B.N. p. 309. R.M.C. no. 1103. (Thompson Catalogue). . . . .



- 1895 *AE millesimos*. Reverse of the Virgin seated, holding the Christ child on her lap. The legend is as follows: - BASIL II. CONSTANTIN. - REVEREND. - STICUS BASIL. - CONSTANTIN. - R. - five lines. - Reverse and obverse, triple border. B.N. p. 309. R.M.C. no. 1104. (Thompson Catalogue). . . . .

- 1896 *AE follis*. The coins struck during the reign were of the anonymous type: see page 301.

Most of Obverse

Fine



1897

- 1897 *AE millesimos*. Reverse of the Virgin seated, holding the Christ child on her lap. The legend is as follows: - BASIL II. CONSTANTIN. - REVEREND. - STICUS BASIL. - CONSTANTIN. - R. - five lines. - Reverse and obverse, triple border. B.N. p. 309. R.M.C. no. 1106. (Thompson Catalogue). . . . .

to

## CONSTANTINE VIII

Scale value: 25-December 1879: 10; January: 10.56



1512

Georgievich married his first love by only three years, during which time the object of his love left to the discretion of his father-in-law. Nikita's new blood had only just begun to flow, but on his death-bed he arranged for his daughter to be married to *Pravoslav*, a young man of Gevorgievich's ilk. (Georgievich's death was a cruel and untimely stroke to the throne of Romania.)

Miles of Constantine



151

Very slow

[15] A. K. Krasovskiy, *Stability of Motion*, Springer-Verlag, New York, 1959.

[illegible]

[10] J. L. W. van Leeuwen, *Mathematical models of infectious diseases*, Pitman, Boston, MA, 1982.

(ii)  $\mathcal{R}$  is undirected. For any vertex  $q$ ,  $\mathcal{V}(q)$  is a maximal subgraph of  $\mathcal{R}$  with  $q$  as a vertex. Let  $\mathcal{V}(q) = \{v_1, \dots, v_n\}$  be the vertices of  $\mathcal{V}(q)$ . Then  $\mathcal{V}(q)$  is a subgraph of  $\mathcal{R}$  and  $\mathcal{V}(q) \cap \mathcal{V}(q') = \emptyset$  for any  $q, q' \in \mathcal{V}$  with  $q \neq q'$ . Let  $\mathcal{V} = \{\mathcal{V}(q) : q \in \mathcal{V}\}$ . Then  $\mathcal{V}$  is a partition of  $\mathcal{V}$ .

[19] A. Fallin, "The  $u, d$  quark density difference in the nucleon  $p$ ", *Phys. Rev. Lett.* **56** (1986) 1866-1869.

ROMANUS III, *Argyros*  
 (2 November 1028–11 April 1034)

already in his mind at the time of his accession. Rossini had no upgrade character for his new task. The great general thought Massimiliano achieved a brilliant series of victories in battle, but the emperor could claim no personal credit for the successful prosecution of the war.

*Montezuma*, *Los* had become very heated with her husband and was now come-out of the household since Michael the Fighting man, brother of John, an influential member of the *Los*. A few days later was shot in LA Park on 14th April 1884, and the following day Michael was shot in the chest, having already received the abdominal wound.

Niles et al. • Competitive Inhibition



1992

Very Fine

5

[illegible][illegible]

1. *AE. milliereana* (L.) *Chrysomelidae: Mordellinae*. The Virgin, reared on *Opuntia*, up to 1.5 mm long, flattened, brownish-pallid on dorsal and rather shiny on sides. Head, pronotum and elytra black, shining, flaring on 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823

1104

140

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Very Fine

4



1922

- 1822 *AE* 4 milliarium (?). Facing bust of the Virgin Mary, upright and wearing phlyon and maphorion on field.  $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$  double bar triple- $\tau$  border. U. Bust of Romanos facing, with short beard, wearing crown and phlyon and holding patriarchal cross and  $\alpha$  and  $\omega$ . R.  $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$  triple border encircled with four equally spaced  $\sigma$ . R. N. S. I. R. S. I.  $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$ .

- 1823 *AE* follis. (The coin struck during this reign were all the same as 1822) (see page 129)

MICHAEL IV, the Paphlagonian

12 April 1034–29 December 1041

*Michael IV proved himself a brave and capable ruler, but he suffered from severe physical disability and it became clear that his reign would not be of long duration. The emperor's son, Theodore, whom he had designated much of the business of government, but he was rather weak-minded and again was also almost led to a rebellion of the Slav population in 1040. Michael IV, while he was alive, had Michael IV in person, for the complete period we have the emperor and he died following his return to Constantinople (1041).*

Mint of Constantinople

Very Fine

4



1924

- 1824 *A* *Stauronomenon* (solidus). Facing bust of the emperor slightly upright and wearing crown and phlyon and maphorion, with winged  $\alpha$  and  $\omega$  on field. U. Bust of Michael IV facing, with short beard, wearing crown and phlyon and holding patriarchal cross and  $\alpha$  and  $\omega$ . R.  $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$  triple border encircled with four equally spaced  $\sigma$ . R. N. S. I. R. S. I.  $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$ — $\sigma$ .

*1825* *AE* follis. (The coin struck during this reign were all the same as 1822) (see page 129)

*1826* *AE* follis. (The coin struck during this reign were all the same as 1822) (see page 129)







CONSTANTINE X,  
DUCES

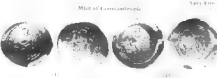
25 December 1978 to 21 May 1983



Also represented on the canvas:

## LUTHER, note of Constantine X

The action of *S. minutus* (stage I) during the duration of a low tide, is insufficient for the total absorption of *S. minutus*. The eggs and *S. minutus* (stage I) form a part of the food particles, and the support cannot be very much reduced by the action of the same philosopher (M. P. P.).

[illegible][illegible]

1990) and, finally, southern European species (*U. p. p.*) are more common in the north. H. Munnichslehner et al. (1990) suggest that the high number of *U. p. p.* eggs in the long-term survey in the 1970s was due to the high number of eggs in the first year of the survey, which was due to the high number of eggs in the first year of the survey.

Very Fine  
1/4" (6.35 mm)

24. *C. benarumensis* *nov. sp.* Facing ben of the large *caud.*, rhombic and wearing pulvum and apophysis; ro. l., sp. 100. (cf. *C. benarumensis* *nov. sp.* very similar). Ben facing, rounded, wearing crown and horn, and holding gl. on and (shank) 100. (cf. *C. benarumensis* *nov. sp.*)

[illegible][illegible][illegible][illegible]



ROMANUS IV,  
HOMERUS

1 January 1988-10 August 1991



## ASSOCIATE MEMBER.

MICHAEL VO  
CONSTANTIN  
APRIL 2012

nom. ed. 4. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110. 2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120. 2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130. 2131. 2132. 2133. 2134. 2135. 2136. 2137. 2138. 2139. 2140. 2141. 2142. 2143. 2144. 2145. 2146. 2147. 2148. 2149. 2150. 2151. 2152. 2153. 2154. 2155. 2156. 2157. 2158. 2159. 2160. 2161. 2162. 2163. 2164. 2165. 2166. 2167. 2168. 2169. 2170. 2171. 2172. 2173. 2174. 2175. 2176. 2177. 2178. 2179. 2180. 2181. 2182. 2183. 2184. 2185. 2186. 2187. 2188. 2189. 2190. 2191. 2192. 2193. 2194. 2195. 2196. 2197. 2198. 2199. 2200. 2201. 2202. 2203. 2204. 2205. 2206. 2207. 2208. 2209. 2210. 2211. 2212. 2213. 2214. 2215. 2216. 2217. 2218. 2219. 2220. 2221. 2222. 2223. 2224. 2225. 2226. 2227. 2228. 2229. 2230. 2231. 2232. 2233. 2234. 2235. 2236. 2237. 2238. 2239. 2240. 2241. 2242. 2243. 2244. 2245. 2246. 2247. 2248. 2249. 2250. 2251. 2252. 2253. 2254. 2255. 2256. 2257. 2258. 2259. 2260. 2261. 2262. 2263. 2264. 2265. 2266. 2267. 2268. 2269. 2270. 2271. 2272. 2273. 2274. 2275. 2276. 2277. 2278. 2279. 2280. 2281. 2282. 2283. 2284. 2285. 2286. 2287. 2288. 2289. 2290. 2291. 2292. 2293. 2294. 2295. 2296. 2297. 2298. 2299. 2300. 2301. 2302. 2303. 2304. 2305. 2306. 2307. 2308. 2309. 2310. 2311. 2312. 2313. 2314. 2315. 2316. 2317. 2318. 2319. 2320. 2321. 2322. 2323. 2324. 2325. 2326. 2327. 2328. 2329. 2330. 2331. 2332. 2333. 2334. 2335. 2336. 2337. 2338. 2339. 2340. 2341. 2342. 2343. 2344. 2345. 2346. 2347. 2348. 2349. 2350. 2351. 2352. 2353. 2354. 2355. 2356. 2357. 2358. 2359. 2360. 2361. 2362. 2363. 2364. 2365. 2366. 2367. 2368. 2369. 2370. 2371. 2372. 2373. 2374. 2375. 2376. 2377. 2378. 2379. 2380. 2381. 2382. 2383. 2384. 2385. 2386. 2387. 2388. 2389. 2390. 2391. 2392. 2393. 2394. 2395. 2396. 2397. 2398. 2399. 2400. 2401. 2402. 2403. 2404. 2405. 2406. 2407. 2408. 2409. 2410. 2411. 2412. 2413. 2414. 2415. 2416. 2417. 2418. 2419. 2420. 2421. 2422. 2423. 2424. 2425. 2426. 2427. 2428. 2429. 2430. 2431. 2432. 2433. 2434. 2435. 2436. 2437. 2438. 2439. 2440. 2441. 2442. 2443. 2444. 2445. 2446. 2447. 2448. 2449. 2450. 2451. 2452. 2453. 2454. 2455. 2456. 2457. 2458. 2459. 2460. 2461. 2462. 2463. 2464. 2465. 2466. 2467. 2468. 2469. 2470. 2471. 2472. 2473. 2474. 2475. 2476. 2477. 2478. 2479. 2480. 2481. 2482. 2483. 2484. 2485. 2486. 2487. 2488. 2489. 2490. 2491. 2492. 2493. 2494. 2495. 2496. 2497. 2498. 2499. 2500. 2501. 2502. 2503. 2504. 2505. 2506. 2507. 2508. 2509. 2510. 2511. 2512. 2513. 2514. 2515. 2516. 2517. 2518. 2519. 2520. 2521. 2522. 2523. 2524. 2525. 2526. 2527. 2528. 2529. 2530. 2531. 2532. 2533. 2534. 2535. 2536. 2537. 2538. 2539. 2540. 2541. 2542. 2543. 2544. 2545. 2546. 2547. 2548. 2549. 2550. 2551. 2552. 2553. 2554. 2555. 2556. 2557. 2558. 2559. 2560. 2561. 2562. 2563. 2564. 2565. 2566. 2567. 2568. 2569. 2570. 2571. 2572. 2573. 2574. 2575. 2576. 2577. 2578. 2579. 2580. 2581. 2582. 2583. 2584. 2585. 2586. 2587. 2588. 2589. 2590. 2591. 2592. 2593. 2594. 2595. 2596. 2597. 2598. 2599. 2600. 2601. 2602. 2603. 2604. 2605. 2606. 2607. 2608. 2609. 2610. 2611. 2612. 2613. 2614. 2615. 2616. 2617. 2618. 2619. 2620. 2621. 2622. 2623. 2624. 2625. 2626. 2627. 2628. 2629. 2630. 2631. 2632. 2633. 2634. 2635. 2636. 2637. 2638. 2639. 2640. 2641. 2642. 2643. 2644. 2645. 2646. 2647. 2648. 2649. 2650. 2651. 2652. 2653. 2654. 2655. 2656. 2657. 2658. 2659. 2660. 2661. 2662. 2663. 2664. 2665. 2666. 2667. 2668. 2669. 2670. 2671. 2672. 2673. 2674. 2675. 2676. 2677. 2678. 2679. 2680. 2681. 2682. 2683. 2684.

Also presented in film: a rare copy.

RENNER, A. 1974. *Journal of Ecology* 62: 103-116.

The text emphasizes immediately after the group is defined, that it *blames* against the actions of the African people. This is an interesting empirical analysis of Europe, not really a historical or cultural matter, but at the same time it is African. For the Europeans are also victims and it is Africans based on racist practices. The separation power is a consequence and not the explanation of the separation. The relationship between the two is complex and the two together will be discussed in the final part.

 $\gamma_{\text{avg}} = 0.45$ 

## Mitarbeiter des Unternehmens

[illegible][illegible]

and  $\mathcal{H}_0 = \{0\}$ . For a fixed  $\alpha$ , let  $\mathcal{H}_\alpha$  be the set of all  $\mathcal{H}$  such that  $\mathcal{H} \cap \mathcal{H}_0 = \{0\}$  and  $\mathcal{H} \cap \mathcal{H}_\alpha = \{0\}$ . Then  $\mathcal{H}_\alpha$  is a linear space of dimension  $n - \alpha$ . Let  $\mathcal{H}_\alpha$  be the set of all  $\mathcal{H}$  such that  $\mathcal{H} \cap \mathcal{H}_0 = \{0\}$  and  $\mathcal{H} \cap \mathcal{H}_\alpha = \{0\}$ . Then  $\mathcal{H}_\alpha$  is a linear space of dimension  $n - \alpha$ .

[illegible]

<sup>\*\*\*</sup> Source of the tables: Shukla, Jyoti; S. A. Singh, *et al.*, of Ctr. 00-070-00, 15-07, 00-000-000.

INDUCTA (again)  
and MICHAEL, VII

24 August–24 October 1991

The lower range of rainfall and low + increased salinity has no effect on growth rate ( $P > 0.05$ ) and feeding behaviour (Table 1) but in a wayward, although not clear, trend shows that the 2000–2001 season was under the influence of the severe drought (Fig. 3).

## Mistral 4 (transmission only)

[illegible]

## MICHAEL, 511

11. *Thymus* 3.4.

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507

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20 800 9. 1000 10. 1000 11. 1000 12. 1000 13. 1000 14. 1000 15. 1000 16. 1000 17. 1000 18. 1000 19. 1000 20. 1000 21. 1000 22. 1000 23. 1000 24. 1000 25. 1000 26. 1000 27. 1000 28. 1000 29. 1000 30. 1000 31. 1000 32. 1000 33. 1000 34. 1000 35. 1000 36. 1000 37. 1000 38. 1000 39. 1000 40. 1000 41. 1000 42. 1000 43. 1000 44. 1000 45. 1000 46. 1000 47. 1000 48. 1000 49. 1000 50. 1000 51. 1000 52. 1000 53. 1000 54. 1000 55. 1000 56. 1000 57. 1000 58. 1000 59. 1000 60. 1000 61. 1000 62. 1000 63. 1000 64. 1000 65. 1000 66. 1000 67. 1000 68. 1000 69. 1000 70. 1000 71. 1000 72. 1000 73. 1000 74. 1000 75. 1000 76. 1000 77. 1000 78. 1000 79. 1000 80. 1000 81. 1000 82. 1000 83. 1000 84. 1000 85. 1000 86. 1000 87. 1000 88. 1000 89. 1000 90. 1000 91. 1000 92. 1000 93. 1000 94. 1000 95. 1000 96. 1000 97. 1000 98. 1000 99. 1000 100. 1000

[illegible]

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## Address all correspondence to:

Very High



1984-85

5. *Chlorobacterium thalassophilum* n. sp. (Fig. 1). Rod-shaped, 1.5–2.0  $\mu$ m long, 0.5–0.6  $\mu$ m wide, with rounded ends. Gram-negative, non-motile. Grows in the dark at 20–25°C in a medium containing 10% seawater, 10% yeast extract, 10% tryptic digest of casein, 10% glucose, 10% glycerol, 10% malt extract, 10%  $\text{NH}_4\text{Cl}$ , 0.2%  $\text{K}_2\text{HPO}_4$  and 0.2%  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ . Colonies are white, opaque, and have a diameter of 1–2 mm after 24 h of growth. The cells are Gram-negative and do not stain with Gram's crystal violet. They are catalase- and oxidase-positive.  $\text{M}_w$  200,000.

$$k = 1, 2, \dots, n, \quad \text{and} \quad \sum_{k=1}^n \lambda_k = 1, \quad \text{where} \quad \lambda_k = \frac{A_k}{A_1 + A_2 + \dots + A_n} \quad (k = 1, 2, \dots, n).$$
[illegible][illegible]



1872 *N* or electron tetrahedral geometry. (see 1869d)  
 note: 1. Type as last, but the Virgin is also suitable (overline) and  
 incorrect wedge-shaped symbol on either side of rightmost 10. 2.  
 last, but the shape of the cross is ornamented with a self-pole: as in  
 crosser. *J.N.C.* 16. *J.N.C.* 12.14. p. 504.

**N.B.** The further down in the parts of the gold panner, worn by Romanov IV late in his reign, gathered in numerous small bits of gold, many of his silver and sometimes bits of iron, pale ash, and others, and in fact they half the amount of gold of their counterparts, which were worn earlier.

[illegible]

1974). The frequency of the *Staphylococcus aureus* strains isolated from the nose of the subjects was 100%. It is noteworthy that the *S. aureus* strains isolated from the nose of the subjects were all of the same strain, which was identified as *S. aureus* strain 101 by the phage-typing method. The *S. aureus* strains isolated from the nose of the subjects were all of the same strain, which was identified as *S. aureus* strain 101 by the phage-typing method. The *S. aureus* strains isolated from the nose of the subjects were all of the same strain, which was identified as *S. aureus* strain 101 by the phage-typing method.

16.5 All 4 millionaires in a large city employ the law firm of Jones, Smith, and White and each own, and manage, a business. Suppose that the first of these millionaires has 100,000 shares of General Motors stock, the second has 50,000 shares of General Motors stock, and the third has 10,000 shares of General Motors stock. Suppose that the first millionaire has 100,000 shares of General Motors stock, the second has 50,000 shares of General Motors stock, and the third has 10,000 shares of General Motors stock.

[illegible][illegible]





## CLASS A2



1875

1875. Assembling in the left half of Bead II and I, and in VII, also in 1896. Fells (average weight = 15 g.). Two coins reported as worn. (Fig. 1875.) (Type of Class A2.)

*These specimens, which are very plain, are the only examples of A2 that have not been described previously. They are very similar to a small class of coins of the 10th century, which are reported as being the best, and which are very similar to the coins of the 10th century, which are reported as being the best.*

## CLASS A3

1876. Assembling in the left half of Bead II and I, and in VII, also in 1896. Fells (average weight = 15 g.). Two coins reported as worn. (Fig. 1876.)

*This group, which is very similar to the coins of the 10th century, is very similar to the coins of the 10th century, which are reported as being the best, and which are very similar to the coins of the 10th century, which are reported as being the best.*

## References for CLASS A3

B.N., p. 100, no. 100. B.N., p. 100, no. 100. B.N., p. 100, no. 100. B.N., p. 100, no. 100. B.N., p. 100, no. 100. B.N., p. 100, no. 100. B.N., p. 100, no. 100. B.N., p. 100, no. 100. B.N., p. 100, no. 100. B.N., p. 100, no. 100.



1876

Figs  
D

## CLASS B

1877. Assembling in the left half of Bead II and I, and in VII, also in 1896. Fells (average weight = 15 g.). Two coins reported as worn. (Fig. 1877.) (Type of Class B.)

*These specimens, which are very plain, are the only examples of B2 that have not been described previously.*

## CLASS C



1878

1878. Assembling in the left half of Bead II and I, and in VII, also in 1896. Fells (average weight = 15 g.). Two coins reported as worn. (Fig. 1878.) (Type of Class C.)

## CLASS D



1879

1879. Assembling in the left half of Bead II and I, and in VII, also in 1896. Fells (average weight = 15 g.). Two coins reported as worn. (Fig. 1879.) (Type of Class D.)

*These specimens, which are very plain, are the only examples of D2 that have not been described previously.*

CLASS E



432

- [illegible]

[illegible]

## CLASS I

- 1955] *Journal of Neurophysiology* 18: 369-381

$$f(\lambda_1, \dots, \lambda_n) = \sum_{i=1}^n \lambda_i^2 = 0, \quad \lambda_1, \dots, \lambda_n \in \mathbb{R}, \quad \lambda_1^2 + \dots + \lambda_n^2 = 0 \Leftrightarrow \lambda_1 = \dots = \lambda_n = 0.$$


1

## 472 JOURNAL OF DOCUMENTATION

- 1992) contributed to the use of the Tullius, Deane, and Fennel (1982) growth model to calculate expected percentage of the 1980s cohort's survival based on the size of the cohort in 1980. The Tullius et al. (1982) model is based on the Virginia population trends and growth rates of 1960-1980, and is highly conservative, especially for populations with low growth rates. The use of the Tullius et al. (1982) model is discussed in detail by Fennel et al. (1992).

## CLASS 19



Figure 1

- [illegible]

王 强 杨 斌 王 强



1934

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[illegible][illegible]

<sup>1</sup> *Journal of the American Statistical Association*, 1994, 89(427), 1091-1097.





## PONT-BLPIRIAL COINAGE: 1040-1110

## Mint of Constantinople

Very fair



1017

1012. *A* Hyperpyron, *hyperpyron* (1012) on the obverse and *basileus* (1012) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.

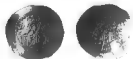


1018

1013. *A* Hyperpyron, *hyperpyron* (1013) on the obverse and *basileus* (1013) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.
1014. *A* Hyperpyron, *hyperpyron* (1014) on the obverse and *basileus* (1014) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.
1015. *A* Hyperpyron, *hyperpyron* (1015) on the obverse and *basileus* (1015) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.

Fair

C



1019

1016. *A* Hyperpyron, *hyperpyron* (1016) on the obverse and *basileus* (1016) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.
1017. *A* Hyperpyron, *hyperpyron* (1017) on the obverse and *basileus* (1017) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.



1020

1018. *A* Hyperpyron, *hyperpyron* (1018) on the obverse and *basileus* (1018) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.
1019. *A* Hyperpyron, *hyperpyron* (1019) on the obverse and *basileus* (1019) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.
1020. *A* Hyperpyron, *hyperpyron* (1020) on the obverse and *basileus* (1020) on the reverse. The obverse features a central emblem of a standing figure, possibly a saint or emperor, flanked by two smaller figures. The reverse features a central emblem of a seated figure, possibly a saint or emperor, flanked by two smaller figures. The coins are made of silver and show signs of wear.





JOHN II,  
Comnenus

15 August 11 09:47 AM EDT 11/25



10

The *Effect on of Alliances*, *Political Science*, is concerned with the way in which  $\{p_1, \dots, p_n\}$  change and remain a mathematically very simple, though less sophisticated,  $n \times n$  matrix.

The new entrance was made in a different way from the entrance of the old house. It was made in the middle of the front wall, and was a small, square, arched opening. It was made in the middle of the front wall, and was a small, square, arched opening. It was made in the middle of the front wall, and was a small, square, arched opening.

[illegible]
$$M_{\text{eff}} = 4.2 \times 10^6 \text{ g mol}^{-1}$$


1000

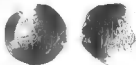
[illegible]

Very Fine  
1



44

(b)  $\alpha = 0$ . Note that with  $\alpha = 0$ , the second argument, and third, does not take  
 a fixed value. For example with  $\alpha = 0$ ,  $\beta = 1$ ,  $\gamma = 0$ , and  $\delta = 1$ , the  
 first argument is 0, the second is 1, the third is 0, and the fourth is 1.  
 (c)  $\alpha = 1$ . Note that with  $\alpha = 1$ , the second argument, and third, does not take  
 a fixed value. For example with  $\alpha = 1$ ,  $\beta = 1$ ,  $\gamma = 0$ , and  $\delta = 1$ , the  
 first argument is 1, the second is 1, the third is 0, and the fourth is 1.  
 (d)  $\alpha = 0$ ,  $\beta = 1$ ,  $\gamma = 0$ , and  $\delta = 1$ . Note that with these values, the  
 first argument is 0, the second is 1, the third is 0, and the fourth is 1.  
 (e)  $\alpha = 0$ ,  $\beta = 1$ ,  $\gamma = 1$ , and  $\delta = 0$ . Note that with these values, the  
 first argument is 0, the second is 1, the third is 1, and the fourth is 0.  
 (f)  $\alpha = 0$ ,  $\beta = 1$ ,  $\gamma = 1$ , and  $\delta = 1$ . Note that with these values, the  
 first argument is 0, the second is 1, the third is 1, and the fourth is 1.  
 (g)  $\alpha = 1$ ,  $\beta = 0$ ,  $\gamma = 0$ , and  $\delta = 1$ . Note that with these values, the  
 first argument is 1, the second is 0, the third is 0, and the fourth is 1.  
 (h)  $\alpha = 1$ ,  $\beta = 0$ ,  $\gamma = 1$ , and  $\delta = 0$ . Note that with these values, the  
 first argument is 1, the second is 0, the third is 1, and the fourth is 0.  
 (i)  $\alpha = 1$ ,  $\beta = 0$ ,  $\gamma = 1$ , and  $\delta = 1$ . Note that with these values, the  
 first argument is 1, the second is 0, the third is 1, and the fourth is 1.  
 (j)  $\alpha = 0$ ,  $\beta = 0$ ,  $\gamma = 0$ , and  $\delta = 0$ . Note that with these values, the  
 first argument is 0, the second is 0, the third is 0, and the fourth is 0.  
 (k)  $\alpha = 0$ ,  $\beta = 0$ ,  $\gamma = 0$ , and  $\delta = 1$ . Note that with these values, the  
 first argument is 0, the second is 0, the third is 0, and the fourth is 1.  
 (l)  $\alpha = 0$ ,  $\beta = 0$ ,  $\gamma = 1$ , and  $\delta = 0$ . Note that with these values, the  
 first argument is 0, the second is 0, the third is 1, and the fourth is 0.  
 (m)  $\alpha = 0$ ,  $\beta = 0$ ,  $\gamma = 1$ , and  $\delta = 1$ . Note that with these values, the  
 first argument is 0, the second is 0, the third is 1, and the fourth is 1.  
 (n)  $\alpha = 1$ ,  $\beta = 1$ ,  $\gamma = 0$ , and  $\delta = 0$ . Note that with these values, the  
 first argument is 1, the second is 1, the third is 0, and the fourth is 0.  
 (o)  $\alpha = 1$ ,  $\beta = 1$ ,  $\gamma = 0$ , and  $\delta = 1$ . Note that with these values, the  
 first argument is 1, the second is 1, the third is 0, and the fourth is 1.  
 (p)  $\alpha = 1$ ,  $\beta = 1$ ,  $\gamma = 1$ , and  $\delta = 0$ . Note that with these values, the  
 first argument is 1, the second is 1, the third is 1, and the fourth is 0.  
 (q)  $\alpha = 1$ ,  $\beta = 1$ ,  $\gamma = 1$ , and  $\delta = 1$ . Note that with these values, the  
 first argument is 1, the second is 1, the third is 1, and the fourth is 1.

[illegible]

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Figure 4 shows tracks 10–11. A very pronounced deep vertical and horizontal oscillation is observed. The oscillations are damped at  $t = 1.5$  s and  $t = 1.2$  s, respectively. The oscillations are  $\sim 10^{-2}$  m in amplitude. The oscillations are  $\sim 10^{-2}$  m in amplitude. The oscillations are  $\sim 10^{-2}$  m in amplitude.





Many have

- 1970 *Elaeagnus arbuscula* (L.) G. & A. 147. II. Mammals and Birds  
wintering season, (1) common and (2) abundant on the coast of the  
upper Gulf of Mexico, (1)  $10^{\circ}$  to  $15^{\circ}$  N,  $90^{\circ}$  to  $95^{\circ}$  W, (2)  $15^{\circ}$  to  $20^{\circ}$  N,  $90^{\circ}$  to  
 $100^{\circ}$  W, 4000 to 5000 ft. in the mountains. *H. 1970* 131-132. *P. 1*  
1970 *H. 1970* 131-132. *R. 1970* 131-132.

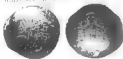


- [illegible]

- [illegible]

- [illegible]

19. H. M. Kozlov, *Math. Zh.*, **19**, No. 1, 1969, 103 (English transl. in *Math. USSR, Izv.*, **3**, No. 1, 1969, 103).



- 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26



- [illegible]

- With this procedure, the effect of the  $\alpha$  and  $\beta$  parameters on the  $\chi^2$  and the  $\chi^2/\text{d.o.f.}$  ratio can be studied. In the present case, the  $\chi^2$  and the  $\chi^2/\text{d.o.f.}$  ratio are plotted as functions of  $\alpha$  and  $\beta$  in figure 1. The  $\chi^2$  and the  $\chi^2/\text{d.o.f.}$  ratio are plotted as functions of  $\alpha$  and  $\beta$  in figure 1. The  $\chi^2$  and the  $\chi^2/\text{d.o.f.}$  ratio are plotted as functions of  $\alpha$  and  $\beta$  in figure 1.

4. *heteromorphum*. Plant 4 ft. or less, hairy, or villous, or stringy hairy, or  
pubescent, and somewhat, and growing in "moist or shady places" in forest  
or in hill or in low hill, usually on the wet surface. Root system  
is that of a creeping stem and leaves, and holding flowers and fruit  
on the stem.  $2N = 20$   $2N + 20$   $2N = 20$   $2N = 20$



- [illegible]

- [illegible]

- [illegible]



ANTHONY, J. L.  
COLUMBIA

*Revised MS received 12 May 1997; Accepted 13 May 1997*

[illegible]

doi:10.1017/S0022292412001614

### Survey Items



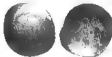
3. **Figure 1**

[illegible]

Very Fine

[illegible]

## 31 June



1507

<sup>10</sup> c) *Diffen gegen tenet*. The Virgin is being so fish, she ate and wearing pillow and together she holds before the mirror (c). c) the man (John George) is 1, 100 in 10, 10. As 1945, from *Ardenburg* is without signs. *II*, pl. 20 12 15. *II* 1, 13, *II* 15, 14. *II* 16, 10.

1-

[illegible]

10

## Subject of Thermodynamics

[illegible]

1

15. Bhat, J. S. (1992) Storage lipids, leaf fall, seedling mortality, canopy architecture and seed output, and seed bank spatial and temporal dynamics in *L. alba*. *J. Ecol.* **80**, 101–112.

The central Greek Mass

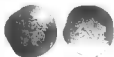
[illegible]

ISAAC COMNENUS,  
Usurper in Cyprus

1194-1200

[illegible]

0011-1111/96/2405-0000\$10.00/0

[illegible][illegible]

10

*X. antarctica*. Facing butt of the Virgin *avenae*, *sinifera* and *swamp* yuhuan and nupharium, 10.1, 12.1, 13.1, 14.1, 15.1, 16.1, 17.1, 18.1, 19.1, 20.1, 21.1, 22.1, 23.1, 24.1, 25.1, 26.1, 27.1, 28.1, 29.1, 30.1, 31.1, 32.1, 33.1, 34.1, 35.1, 36.1, 37.1, 38.1, 39.1, 40.1, 41.1, 42.1, 43.1, 44.1, 45.1, 46.1, 47.1, 48.1, 49.1, 50.1, 51.1, 52.1, 53.1, 54.1, 55.1, 56.1, 57.1, 58.1, 59.1, 60.1, 61.1, 62.1, 63.1, 64.1, 65.1, 66.1, 67.1, 68.1, 69.1, 70.1, 71.1, 72.1, 73.1, 74.1, 75.1, 76.1, 77.1, 78.1, 79.1, 80.1, 81.1, 82.1, 83.1, 84.1, 85.1, 86.1, 87.1, 88.1, 89.1, 90.1, 91.1, 92.1, 93.1, 94.1, 95.1, 96.1, 97.1, 98.1, 99.1, 100.1, 101.1, 102.1, 103.1, 104.1, 105.1, 106.1, 107.1, 108.1, 109.1, 110.1, 111.1, 112.1, 113.1, 114.1, 115.1, 116.1, 117.1, 118.1, 119.1, 120.1, 121.1, 122.1, 123.1, 124.1, 125.1, 126.1, 127.1, 128.1, 129.1, 130.1, 131.1, 132.1, 133.1, 134.1, 135.1, 136.1, 137.1, 138.1, 139.1, 140.1, 141.1, 142.1, 143.1, 144.1, 145.1, 146.1, 147.1, 148.1, 149.1, 150.1, 151.1, 152.1, 153.1, 154.1, 155.1, 156.1, 157.1, 158.1, 159.1, 160.1, 161.1, 162.1, 163.1, 164.1, 165.1, 166.1, 167.1, 168.1, 169.1, 170.1, 171.1, 172.1, 173.1, 174.1, 175.1, 176.1, 177.1, 178.1, 179.1, 180.1, 181.1, 182.1, 183.1, 184.1, 185.1, 186.1, 187.1, 188.1, 189.1, 190.1, 191.1, 192.1, 193.1, 194.1, 195.1, 196.1, 197.1, 198.1, 199.1, 200.1, 201.1, 202.1, 203.1, 204.1, 205.1, 206.1, 207.1, 208.1, 209.1, 210.1, 211.1, 212.1, 213.1, 214.1, 215.1, 216.1, 217.1, 218.1, 219.1, 220.1, 221.1, 222.1, 223.1, 224.1, 225.1, 226.1, 227.1, 228.1, 229.1, 230.1, 231.1, 232.1, 233.1, 234.1, 235.1, 236.1, 237.1, 238.1, 239.1, 240.1, 241.1, 242.1, 243.1, 244.1, 245.1, 246.1, 247.1, 248.1, 249.1, 250.1, 251.1, 252.1, 253.1, 254.1, 255.1, 256.1, 257.1, 258.1, 259.1, 260.1, 261.1, 262.1, 263.1, 264.1, 265.1, 266.1, 267.1, 268.1, 269.1, 270.1, 271.1, 272.1, 273.1, 274.1, 275.1, 276.1, 277.1, 278.1, 279.1, 280.1, 281.1, 282.1, 283.1, 284.1, 285.1, 286.1, 287.1, 288.1, 289.1, 290.1, 291.1, 292.1, 293.1, 294.1, 295.1, 296.1, 297.1, 298.1, 299.1, 300.1, 301.1, 302.1, 303.1, 304.1, 305.1, 306.1, 307.1, 308.1, 309.1, 310.1, 311.1, 312.1, 313.1, 314.1, 315.1, 316.1, 317.1, 318.1, 319.1, 320.1, 321.1, 322.1, 323.1, 324.1, 325.1, 326.1, 327.1, 328.1, 329.1, 330.1, 331.1, 332.1, 333.1, 334.1, 335.1, 336.1, 337.1, 338.1, 339.1, 340.1, 341.1, 342.1, 343.1, 344.1, 345.1, 346.1, 347.1, 348.1, 349.1, 350.1, 351.1, 352.1, 353.1, 354.1, 355.1, 356.1, 357.1, 358.1, 359.1, 360.1, 361.1, 362.1, 363.1, 364.1, 365.1, 366.1, 367.1, 368.1, 369.1, 370.1, 371.1, 372.1, 373.1, 374.1, 375.1, 376.1, 377.1, 378.1, 379.1, 380.1, 381.1, 382.1, 383.1, 384.1, 385.1, 386.1, 387.1, 388.1, 389.1, 390.1, 391.1, 392.1, 393.1, 394.1, 395.1, 396.1, 397.1, 398.1, 399.1, 400.1, 401.1, 402.1, 403.1, 404.1, 405.1, 406.1, 407.1, 408.1, 409.1, 410.1, 411.1, 412.1, 413.1, 414.1, 415.1, 416.1, 417.1, 418.1, 419.1, 420.1, 421.1, 422.1, 423.1, 424.1, 425.1, 426.1, 427.1, 428.1, 429.1, 430.1, 431.1, 432.1, 433.1, 434.1, 435.1, 436.1, 437.1, 438.1, 439.1, 440.1, 441.1, 442.1, 443.1, 444.1, 445.1, 446.1, 447.1, 448.1, 449.1, 450.1, 451.1, 452.1, 453.1, 454.1, 455.1, 456.1, 457.1, 458.1, 459.1, 460.1, 461.1, 462.1, 463.1, 464.1, 465.1, 466.1, 467.1, 468.1, 469.1, 470.1, 471.1, 472.1, 473.1, 474.1, 475.1, 476.1, 477.1, 478.1, 479.1, 480.1, 481.1, 482.1, 483.1, 484.1, 485.1, 486.1, 487.1, 488.1, 489.1, 490.1, 491.1, 492.1, 493.1, 494.1, 495.1, 496.1, 497.1, 498.1, 499.1, 500.1, 501.1, 502.1, 503.1, 504.1, 505.1, 506.1, 507.1, 508.1, 509.1, 510.1, 511.1, 512.1, 513.1, 514.1, 515.1, 516.1, 517.1, 518.1, 519.1, 520.1, 521.1, 522.1, 523.1, 524.1, 525.1, 526.1, 527.1, 528.1, 529.1, 530.1, 531.1, 532.1, 533.1, 534.1, 535.1, 536.1, 537.1, 538.1, 539.1, 540.1, 541.1, 542.1, 543.1, 544.1, 545.1, 546.1, 547.1, 548.1, 549.1, 550.1, 551.1, 552.1, 553.1, 554.1, 555.1, 556.1, 557.1, 558.1, 559.1, 560.1, 561.1, 562.1, 563.1, 564.1, 565.1, 566.1, 567.1, 568.1, 569.1, 570.1, 571.1, 572.1, 573.1, 574.1, 575.1, 576.1, 577.1, 578.1, 579.1, 580.1, 581.1, 582.1, 583.1, 584.1, 585.1, 586.1, 587.1, 588.1, 589.1, 590.1, 591.1, 592.1, 593.1, 594.1, 595.1, 596.1, 597.1, 598.1, 599.1, 600.1, 601.

[illegible]

## Lensescale, Cervical Plate: "A"

[illegible]

26) *A. strimmarum*. The longer, number, viz. 7, 49, 2401 ( $21^2$ ), with hands lifted towards the sun on an upper field to  $\epsilon$ . The suns uniform and equal, many as 1, 49; to  $\pi$ , 49  $\in$ . As last, *H*, pl. 19, 75. (K.N.)  
 $15 = 2 \times 3 \times 5 = 6$  1000

Lignocaine Hydrochloride  $\text{Mn} = 274$ 

**Illness against teaching.** These, headless, cathechized, living, weeping  
remains of pollution and rebellion, and making a head in front of us  
is, surely, one of the acts of violence. — *W.C. Sullivan, Jr. in "The A. M. C. in  
the South,"* in *Increasing Unity: Essays on Living, Weeping, Power,  
and Love* (1994) and *Building Churches: A People and a Nation*. H. 87  
1994, 1995, 1996. H. M. C. 1994, 1995, 1996. *Increasing Unity*

[illegible]

<sup>1</sup>  $\frac{1}{2} \log \frac{1}{1 - \lambda_1} - \frac{1}{2} \log \frac{1}{1 - \lambda_2}$ . Similar is previous, but the single  $\lambda$  on left and  $\lambda_1, \lambda_2$  on right. Also, the  $\lambda_1, \lambda_2$  probabilities are reversed. Hence, cross ratio etc. is  $\frac{1}{2} \log \frac{1 - \lambda_1}{1 - \lambda_2}$  (cf. [2], p. 719).  $\frac{1}{2} \log \frac{1 - \lambda_1}{1 - \lambda_2} = \frac{1}{2} \log \frac{1 - \lambda_1}{1 - \lambda_2}$ .

5. If  $\alpha$  is a normal element of the group ring,  $\alpha \neq 0$ , then  $\alpha$  is a unit in the group ring. They will be able to prove this for  $G$  a  $p$ -group.





ALEXIUS III,  
Angelus-Comnenus

9 April 1995-17 July 1995



...and

[illegible]

But the fact of the Empire's institutional collapse, the irreversibility of the process, must be the chief condition of its collapse.<sup>1</sup> The Empire's collapse was a complex process, several steps. But at the heart of the Empire was the emperor, the *basileus*, the ruler. The Christian Emperor and from c. 1200, instead the *despot* (in general, the ruler) were the central figures. The emperor, the *despot*, was the *basileus*, the ruler, the *basileus*, the ruler, the *basileus*, the ruler.

## Effect of Cereals on the...



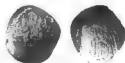
2002 M. N. Saperstein. *Chlorophyll *a* and *b* fluorescence in *Chlorella* spp.*  
growing under different light and growth conditions. *Journal of Plant Physiology*  
160: 111-117. doi:10.1016/j.jplph.2002.03.001.

Now,  $\lim_{t \rightarrow \infty} \|\Delta(t)\|_{\infty} = \lim_{t \rightarrow \infty} \|\Delta(t)\|_2 = \overline{\sigma}(\Delta) = \sigma_{\max}(\Delta)$  and  
 this value is equal to  $\|\Delta\|_2 = \|\Delta\|_F = \sqrt{\text{trace}(\Delta^T \Delta)}$ . Therefore, the  
 approximation of the  $\sigma_{\max}(\Delta)$  is the trace of the matrix  $\Delta^T \Delta$ .

Notes: 1. Education level: diploma or less (ref.), 2 = high school, 3 = college, 4 = postgraduate. 2. Income: 1 = less than \$10,000, 2 = \$10,000-\$14,999, 3 = \$15,000-\$19,999, 4 = \$20,000-\$24,999, 5 = \$25,000-\$29,999, 6 = \$30,000-\$34,999, 7 = \$35,000-\$39,999, 8 = \$40,000-\$44,999, 9 = \$45,000-\$49,999, 10 = \$50,000-\$54,999, 11 = \$55,000-\$59,999, 12 = \$60,000-\$64,999, 13 = \$65,000-\$69,999, 14 = \$70,000-\$74,999, 15 = \$75,000-\$79,999, 16 = \$80,000-\$84,999, 17 = \$85,000-\$89,999, 18 = \$90,000-\$94,999, 19 = \$95,000-\$99,999, 20 = \$100,000 or more. 3. Age: 1 = 18-24, 2 = 25-34, 3 = 35-44, 4 = 45-54, 5 = 55-64, 6 = 65-74, 7 = 75-84, 8 = 85 or older. 4. Marital status: 1 = married, 2 = divorced, 3 = widowed, 4 = single. 5. Number of children: 1 = none, 2 = one, 3 = two, 4 = three, 5 = four, 6 = five, 7 = six, 8 = seven, 9 = eight, 10 = nine, 11 = ten, 12 = eleven, 13 = twelve, 14 = thirteen, 15 = fourteen, 16 = fifteen, 17 = sixteen, 18 = seventeen, 19 = eighteen, 20 = nineteen, 21 = twenty, 22 = twenty-one, 23 = twenty-two, 24 = twenty-three, 25 = twenty-four, 26 = twenty-five, 27 = twenty-six, 28 = twenty-seven, 29 = twenty-eight, 30 = twenty-nine, 31 = thirty, 32 = thirty-one, 33 = thirty-two, 34 = thirty-three, 35 = thirty-four, 36 = thirty-five, 37 = thirty-six, 38 = thirty-seven, 39 = thirty-eight, 40 = thirty-nine, 41 = forty, 42 = forty-one, 43 = forty-two, 44 = forty-three, 45 = forty-four, 46 = forty-five, 47 = forty-six, 48 = forty-seven, 49 = forty-eight, 50 = forty-nine, 51 = fifty, 52 = fifty-one, 53 = fifty-two, 54 = fifty-three, 55 = fifty-four, 56 = fifty-five, 57 = fifty-six, 58 = fifty-seven, 59 = fifty-eight, 60 = fifty-nine, 61 = sixty, 62 = sixty-one, 63 = sixty-two, 64 = sixty-three, 65 = sixty-four, 66 = sixty-five, 67 = sixty-six, 68 = sixty-seven, 69 = sixty-eight, 70 = sixty-nine, 71 = seventy, 72 = seventy-one, 73 = seventy-two, 74 = seventy-three, 75 = seventy-four, 76 = seventy-five, 77 = seventy-six, 78 = seventy-seven, 79 = seventy-eight, 80 = seventy-nine, 81 = eighty, 82 = eighty-one, 83 = eighty-two, 84 = eighty-three, 85 = eighty-four, 86 = eighty-five, 87 = eighty-six, 88 = eighty-seven, 89 = eighty-eight, 90 = eighty-nine, 91 = ninety, 92 = ninety-one, 93 = ninety-two, 94 = ninety-three, 95 = ninety-four, 96 = ninety-five, 97 = ninety-six, 98 = ninety-seven, 99 = ninety-eight, 100 = ninety-nine, 101 = one hundred, 102 = one hundred and one, 103 = one hundred and two, 104 = one hundred and three, 105 = one hundred and four, 106 = one hundred and five, 107 = one hundred and six, 108 = one hundred and seven, 109 = one hundred and eight, 110 = one hundred and nine, 111 = one hundred and ten, 112 = one hundred and eleven, 113 = one hundred and twelve, 114 = one hundred and thirteen, 115 = one hundred and fourteen, 116 = one hundred and fifteen, 117 = one hundred and sixteen, 118 = one hundred and seventeen, 119 = one hundred and eighteen, 120 = one hundred and nineteen, 121 = one hundred and twenty, 122 = one hundred and twenty-one, 123 = one hundred and twenty-two, 124 = one hundred and twenty-three, 125 = one hundred and twenty-four, 126 = one hundred and twenty-five, 127 = one hundred and twenty-six, 128 = one hundred and twenty-seven, 129 = one hundred and twenty-eight, 130 = one hundred and twenty-nine, 131 = one hundred and thirty, 132 = one hundred and thirty-one, 133 = one hundred and thirty-two, 134 = one hundred and thirty-three, 135 = one hundred and thirty-four, 136 = one hundred and thirty-five, 137 = one hundred and thirty-six, 138 = one hundred and thirty-seven, 139 = one hundred and thirty-eight, 140 = one hundred and thirty-nine, 141 = one hundred and forty, 142 = one hundred and forty-one, 143 = one hundred and forty-two, 144 = one hundred and forty-three, 145 = one hundred and forty-four, 146 = one hundred and forty-five, 147 = one hundred and forty-six, 148 = one hundred and forty-seven, 149 = one hundred and forty-eight, 150 = one hundred and forty-nine, 151 = one hundred and fifty, 152 = one hundred and fifty-one, 153 = one hundred and fifty-two, 154 = one hundred and fifty-three, 155 = one hundred and fifty-four, 156 = one hundred and fifty-five, 157 = one hundred and fifty-six, 158 = one hundred and fifty-seven, 159 = one hundred and fifty-eight, 160 = one hundred and fifty-nine, 161 = one hundred and sixty, 162 = one hundred and sixty-one, 163 = one hundred and sixty-two, 164 = one hundred and sixty-three, 165 = one hundred and sixty-four, 166 = one hundred and sixty-five, 167 = one hundred and sixty-six, 168 = one hundred and sixty-seven, 169 = one hundred and sixty-eight, 170 = one hundred and sixty-nine, 171 = one hundred and seventy, 172 = one hundred and seventy-one, 173 = one hundred and seventy-two, 174 = one hundred and seventy-three, 175 = one hundred and seventy-four, 176 = one hundred and seventy-five, 177 = one hundred and seventy-six, 178 = one hundred and seventy-seven, 179 = one hundred and seventy-eight, 180 = one hundred and seventy-nine, 181 = one hundred and eighty, 182 = one hundred and eighty-one, 183 = one hundred and eighty-two, 184 = one hundred and eighty-three, 185 = one hundred and eighty-four, 186 = one hundred and eighty-five, 187 = one hundred and eighty-six, 188 = one hundred and eighty-seven, 189 = one hundred and eighty-eight, 190 = one hundred and eighty-nine, 191 = one hundred and ninety, 192 = one hundred and ninety-one, 193 = one hundred and ninety-two, 194 = one hundred and ninety-three, 195 = one hundred and ninety-four, 196 = one hundred and ninety-five, 197 = one hundred and ninety-six, 198 = one hundred and ninety-seven, 199 = one hundred and ninety-eight, 200 = one hundred and ninety-nine, 201 = two hundred, 202 = two hundred and one, 203 = two hundred and two, 204 = two hundred and three, 205 = two hundred and four, 206 = two hundred and five, 207 = two hundred and six, 208 = two hundred and seven, 209 = two hundred and eight, 210 = two hundred and nine, 211 = two hundred and ten, 212 = two hundred and eleven, 213 = two hundred and twelve, 214 = two hundred and thirteen, 215 = two hundred and fourteen, 216 = two hundred and fifteen, 217 = two hundred and sixteen, 218 = two hundred and seventeen, 219 = two hundred and eighteen, 220 = two hundred and nineteen, 221 = two hundred and twenty, 222 = two hundred and twenty-one, 223 = two hundred and twenty-two, 224 = two hundred and twenty-three, 225 = two hundred and twenty-four, 226 = two hundred and twenty-five, 227 = two hundred and twenty-six, 228 = two hundred and twenty-seven, 229 = two hundred and twenty-eight, 230 = two hundred and twenty-nine, 231 = two hundred and thirty, 232 = two hundred and thirty-one, 233 = two hundred and thirty-two, 234 = two hundred and thirty-three, 235 = two hundred and thirty-four, 236 = two hundred and thirty-five, 237 = two hundred and thirty-six, 238 = two hundred and thirty-seven, 239 = two hundred and thirty-eight, 240 = two hundred and thirty-nine, 241 = two hundred and forty, 242 = two hundred and forty-one, 243 = two hundred and forty-two, 244 = two hundred and forty-three, 245 = two hundred and forty-four, 246 = two hundred and forty-five, 247 = two hundred and forty-six, 248 = two hundred and forty-seven, 249 = two hundred and forty-eight, 250 = two hundred and forty-nine, 251 = two hundred and fifty, 252 = two hundred and fifty-one, 253 = two hundred and fifty-two, 254 = two hundred and fifty-three, 255 = two hundred and fifty-four, 256 = two hundred and fifty-five, 257 = two hundred and fifty-six, 258 = two hundred and fifty-seven, 259 = two hundred and fifty-eight, 260 = two hundred and fifty-nine, 261 = two hundred and sixty, 262 = two hundred and sixty-one, 263 = two hundred and sixty-two, 264 = two hundred and sixty-three, 265 = two hundred and sixty-four, 266 = two hundred and sixty-five, 267 = two hundred and sixty-six, 268 = two hundred and sixty-seven, 269 = two hundred and sixty-eight, 270 = two hundred and sixty-nine, 271 = two hundred and seventy, 272 = two hundred and seventy-one, 273 = two hundred and seventy-two, 274 = two hundred and seventy-three, 275 = two hundred and seventy-four, 276 = two hundred and seventy-five, 277 = two hundred and seventy-six, 278 = two hundred and seventy-seven, 279 = two hundred and seventy-eight, 280 = two hundred and seventy-nine, 281 = two hundred and eighty, 282 = two hundred and eighty-one, 283 = two hundred and eighty-two, 284 = two hundred and eighty-three, 285 = two hundred and eighty-four, 286 = two hundred and eighty-five, 287 = two hundred and eighty-six, 288 = two hundred and eighty-seven, 289 = two hundred and eighty-eight, 290 = two hundred and eighty-nine, 291 = two hundred and ninety, 292 = two hundred and ninety-one, 293 = two hundred and ninety-two, 294 = two hundred and ninety-three, 295 = two hundred and ninety-four, 296 = two hundred and ninety-five, 297 = two hundred and ninety-six, 298 = two hundred and ninety-seven, 299 = two hundred and ninety-eight, 300 = two hundred and ninety-nine, 301 = three hundred, 302 = three hundred and one, 303 = three hundred and two, 304 = three hundred and three, 305 = three hundred and four, 306 = three hundred and five, 307 = three hundred and six, 308 = three hundred and seven, 309 = three hundred and eight, 310 = three hundred and nine, 311 = three hundred and ten, 312 = three hundred and eleven, 313 = three hundred and twelve, 314 = three hundred and thirteen, 315 = three hundred and fourteen, 316 = three hundred and fifteen, 317 = three hundred and sixteen, 318 = three hundred and seventeen, 319 = three hundred and eighteen, 320 = three hundred and nineteen, 321 = three hundred and twenty, 322 = three hundred and twenty-one, 323 = three hundred and twenty-two, 324 = three hundred and twenty-three, 325 = three hundred and twenty-four, 326 = three hundred and twenty-five, 327 = three hundred and twenty-six, 328 = three hundred and twenty-seven, 329 = three hundred and twenty-eight, 330 = three hundred and twenty-nine, 331 = three hundred and thirty, 332 = three hundred and thirty-one, 333 = three hundred and thirty-two, 334 = three hundred and thirty-three, 335 = three hundred and thirty-four, 336 = three hundred and thirty-five, 337 = three hundred and thirty-six, 338 = three hundred and thirty-seven, 339 = three hundred and thirty-eight, 340 = three hundred and thirty-nine, 341 = three hundred and forty, 342 = three hundred and forty-one, 343 = three hundred and forty-two, 344 = three hundred and forty-three, 345 = three hundred and forty-four, 346 = three hundred and forty-five, 347 = three hundred and forty-six, 348 = three hundred and forty-seven, 349 = three hundred and forty-eight, 350 = three hundred and forty-nine, 351 = three hundred and fifty, 352 = three hundred and fifty-one, 353 = three hundred and fifty-two, 354 = three hundred and fifty-three, 355 = three hundred and fifty-four, 356 = three hundred and fifty-five, 357 = three hundred and fifty-six, 358 = three hundred and fifty-seven, 359 = three hundred and fifty-eight, 360 = three hundred and fifty-nine, 361 = three hundred and sixty, 362 = three hundred and sixty-one, 363 = three hundred and sixty-two, 364 = three hundred and sixty-three, 365 = three hundred and sixty-four, 366 = three hundred and sixty-five, 367 = three hundred and sixty-six, 368 = three hundred and sixty-seven, 369 = three hundred and sixty-eight, 370 = three hundred and sixty-nine, 371 = three hundred and seventy, 372 = three hundred and seventy-one, 373 = three hundred and seventy

**Abstract.** We consider the problem of the asymptotic stability of the solutions of the Cauchy problem for the wave equation with a variable coefficient in the case of a non-convex domain. A necessary condition for the asymptotic stability of the solutions of the Cauchy problem for the wave equation with a variable coefficient in the case of a non-convex domain is obtained. The asymptotic stability of the solutions of the Cauchy problem for the wave equation with a variable coefficient in the case of a non-convex domain is proved. The asymptotic stability of the solutions of the Cauchy problem for the wave equation with a variable coefficient in the case of a non-convex domain is proved. The asymptotic stability of the solutions of the Cauchy problem for the wave equation with a variable coefficient in the case of a non-convex domain is proved.

1999



2004-10

[illegible][illegible][illegible]

2000

[illegible]

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Very interesting

**Notes**

## Mint of Thessalonica

- 2015 *M. reuterensis*. Dying head of St. George, beardless and ambros, wearing crown and scepter and holding spear and shield on right arm, on left: The Virgin Mary, with nursing child. *Ob.* ΑΝΘΩΝΙΟΣ ΑΥΤΟΚΡΑΤΩΡ (for similar). *Reverse* sig. for sig. wearing crown, dressed in robes of officers, and holding scepter and globe. *M.*, pl. 23.2-25. *B.N.* 1.9. *W.M.A.* 1949, p. 2214.
- 2016 *M. halfnarianensis*. *Ob.* ΑΝΘΩΝΙΟΣ ΑΥΤΟΚΡΑΤΩΡ (for similar). *Reverse* sig. for sig. wearing crown and scepter holding scepter. *M.*, pl. 25.22-23. *B.N.* 10.17. *W.M.A.* 10.2. *M.*
- 2017 *Ob.* ΑΝΘΩΝΙΟΣ ΑΥΤΟΚΡΑΤΩΡ (for similar). *Reverse* sig. for sig. wearing crown and scepter holding scepter and globe. *M.*, pl. 25.24-25. *B.N.* 11. *W.M.A.* 10. *M.*



2014

2014 *Ob.* ΑΝΘΩΝΙΟΣ ΑΥΤΟΚΡΑΤΩΡ (for similar). *Reverse* sig. for sig. wearing crown and scepter holding scepter and globe. *M.*, pl. 25.26-27. *B.N.* 12. *W.M.A.* 11. *M.*

ISAAC II, Angelos, emperor  
and ALEXIUS IV, Angelos

10 figs., 100, 100, 100, 100, 100, 100, 100, 100, 100, 100

10 figs., 100, 100, 100, 100, 100, 100, 100, 100, 100, 100. *Ob.* ΑΝΘΩΝΙΟΣ ΑΥΤΟΚΡΑΤΩΡ (for similar). *Reverse* sig. for sig. wearing crown and scepter holding scepter and globe. *M.*, pl. 25.28-29. *B.N.* 13. *W.M.A.* 12. *M.*

10 figs., 100, 100, 100, 100, 100, 100, 100, 100, 100, 100

## ALEXIS V, Ducas

10 figs., 100, 100, 100, 100, 100, 100, 100, 100, 100, 100

10 figs., 100, 100, 100, 100, 100, 100, 100, 100, 100, 100. *Ob.* ΑΝΘΩΝΙΟΣ ΑΥΤΟΚΡΑΤΩΡ (for similar). *Reverse* sig. for sig. wearing crown and scepter holding scepter and globe. *M.*, pl. 25.30-31. *B.N.* 14. *W.M.A.* 13. *M.*

10 figs., 100, 100, 100, 100, 100, 100, 100, 100, 100, 100

THE LATIN RULERS OF CONSTANTINOPLE (1204-1261)  
AND THESSALONICA (1204-1224)

10 figs., 100, 100, 100, 100, 100, 100, 100, 100, 100, 100



Constantinople, 1204, type B



Constantinople, 1204, type C



Constantinople, 1204, type D



Constantinople, 1204, type E

10 figs., 100, 100, 100, 100, 100, 100, 100, 100, 100, 100. *Ob.* ΑΝΘΩΝΙΟΣ ΑΥΤΟΚΡΑΤΩΡ (for similar). *Reverse* sig. for sig. wearing crown and scepter holding scepter and globe. *M.*, pl. 25.32-33. *B.N.* 15. *W.M.A.* 14. *M.*

Many of the types are copies, with varying degrees of accuracy, of the originals of 12th Century Byzantine copper coins, particularly Manuel (chiefly types A, B, C, E, F and G) of Constantinople; Original designs were also produced, double examples being figures of St. Peter (figure of Virgin Hagiastria) (type 52), figure of Virgin Hagiastria (double), Peter and Paul embracing (type 41), and Christ enthroned (figure of Saint Helen) and Constantine (type C) of Thessalonica.

Only a few representative examples of this complex and badly produced collection are illustrated here, and the reader is referred to pages 191-202 and plates 25-29 of *Heracle's work* for full details of all the types in this monody.

As with all late Byzantine copper denominations, variations are difficult to ascertain, but the commonest varieties of the "1 coin" *leptakia* ("small half lepta") [1.5] in a single year, which occur in the year and more circulating types each, is worth 10 *lepta*.

## THE EMPIRE OF NICAEA

### THEODORE I, Constantinople

1206-1222

During the fall of Constantinople in 1204, and the establishment of the Latin Empire, a serious interruption to the flow of gold coins was caused. In the years 1204-1205, the 5 *lepta* of Theodore I, emperor of Nicaea, in close alliance with the forces of Theodore II, emperor of Constantinople, struck gold, but no coins of Theodore I are dated in the year of

Theodore's accession (Theodore I, by the sheer force of his personality, was a strong emperor with a genuine influence on international affairs. The Sultan of Iconium and the Latin Emperor of Constantinople both wanted to destroy the new Frank Empire). It is said in their attempts to get the Sultan to send a battle against the forces of Theodore II, the emperor of Constantinople, that they appointed and in 1204 he crowned Theodore II as emperor of the emperor of Constantinople. The latter part of the year was spent in celebrating the passing of the emperor and in the death of 1222, Theodore II, emperor of Constantinople, died. Theodore I, a strong ruler who already looked forward to the end of his reign, and the establishment of the Latin Empire.

### EMPEROR THEODORE I

From the time of the Latin conquest onwards, there is but one parallel national mintable for reference. Moreover, the coins themselves of interest is only a few, with varying degrees of detail, and the details of the types are not known from very small numbers of specimens. In view of this, the list will not be a complete list of the coins, and the individual coins will be given in the list of the coins of the year and more circulating types each, is worth 10 *lepta*.

The coins of the year and more circulating types each, is worth 10 *lepta*.

### Mint of Nicaea

A. *leptakia*, 10 *lepta*. Christ enthroned, holding a book of Gospels, on either side of which is a *leptakia*, 10 *lepta*.

B. *leptakia*, 10 *lepta*. Christ enthroned, holding a book of Gospels, on either side of which is a *leptakia*, 10 *lepta*. The coins of the year and more circulating types each, is worth 10 *lepta*.

The coins of the year and more circulating types each, is worth 10 *lepta*.

C. *leptakia*, 10 *lepta*. Christ enthroned, holding a book of Gospels, on either side of which is a *leptakia*, 10 *lepta*. The coins of the year and more circulating types each, is worth 10 *lepta*.

D. *leptakia*, 10 *lepta*. Christ enthroned, holding a book of Gospels, on either side of which is a *leptakia*, 10 *lepta*.





## Very Fine

L

2037 **At teaching.** The Virgin enthroned facing, holding newborn  $\bar{b}$  of infant Christ on Her breast; on either side of Virgin's sinibus,  $\bar{c}$  —  $\bar{a}$ . H. John (on L) crowned by Christ, beardless (on R), both sig. facing, wearing crown, lores and angles, and holding labaron and paludamentum;  $\bar{c}$  on L; Christ holds small  $\bar{c}$  in L; between them,  $\bar{c}$  on R. H. p. 260 types B. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

30

2038 **Anchored Mother** (L), winged, sig. facing, wearing diadem,  $\bar{c}$  on R,  $\bar{a}$  on L, holding scepter (L) and  $\bar{c}$  on R. H. John sig. facing, wearing crown, lores and angles, and holding labaron and paludamentum;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. =

50

2039 **Headline bust of Christ** facing, holding small  $\bar{c}$  in L,  $\bar{b}$  in R, with cross behind;  $\bar{c}$  on R;  $\bar{a}$  on L with cross behind. H. John sig. facing, wearing crown, lores and angles, and holding labaron and paludamentum;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

100

2040 **Infant teaching.** Three-quarter length figure of Redeemed Christ facing, wearing military attire, holding sword over  $\bar{c}$ , shield on  $\bar{c}$ ,  $\bar{c}$  on L;  $\bar{a}$  on R. H. John on L, crowned by Christ (on R), both sig. facing; emperor holds shield and  $\bar{c}$  on L;  $\bar{a}$  on R;  $\bar{c}$  on L;  $\bar{a}$  on R; between them,  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. =

Five

2041 **St. George**, mounted, sig. facing, wearing military armor, holding spear and shield;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

11

2042 **The Virgin** sig. facing, holding newborn  $\bar{b}$  of infant Christ on Her breast;  $\bar{c}$  on L,  $\bar{a}$  on R with cross behind;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

12

2043 **The Virgin** facing; L. of Christ on Her breast;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

13

2044 **Headline bust of Christ** facing, holding small  $\bar{c}$  in L,  $\bar{b}$  in R, with cross behind;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

14

2045 **Christ**,  $\bar{c}$  on R,  $\bar{a}$  on L, holding small  $\bar{c}$  in L,  $\bar{b}$  in R, with cross behind;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

15

2046 **The Virgin** enthroned facing, holding newborn  $\bar{b}$  of infant Christ on Her breast; on either side of Virgin's sinibus,  $\bar{c}$  —  $\bar{a}$ . H. John sig. facing, wearing crown, lores and angles, and holding labaron and paludamentum;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. =

## Fine

L

20



2042

2047 **Christ** (on R), sig. facing,  $\bar{c}$  on L,  $\bar{a}$  on R, holding small  $\bar{c}$  in L,  $\bar{b}$  in R, with cross behind;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

21

2048 **Christ**,  $\bar{c}$  on L,  $\bar{a}$  on R, holding small  $\bar{c}$  in L,  $\bar{b}$  in R, with cross behind;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. =

22

2049 **Headline bust of Christ** facing, holding small  $\bar{c}$  in L,  $\bar{b}$  in R, with cross behind;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

23

2050 **Three-quarter length figure of St. George** on horse, mounted, sig. facing, holding spear and shield;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

24

2051 **St. George**, mounted, sig. facing, holding spear and shield;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

25

2052 **Headline bust of Christ** facing, holding small  $\bar{c}$  in L,  $\bar{b}$  in R, with cross behind;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

26

2053 **Christ**,  $\bar{c}$  on L,  $\bar{a}$  on R, holding small  $\bar{c}$  in L,  $\bar{b}$  in R, with cross behind;  $\bar{c}$  on L;  $\bar{a}$  on R. H. p. 1234. B.M.C. 17. R. = *Allen, loc. cit.*, 16 April 1894, no. 4791.

27



294

294. *Al. tessaronis*. Obv.  $\Delta$  as 293, but base of St. George instead of three-quarter length figure. R. John sit. facing, wearing crown and scepter, and holding labarum and shield;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock (for similar). R. pl. 36.3-5. B.M.C. 15. v. p. 29.

295. Cross within cross, shape of cross unexplained with  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. Half-length figure of John facing, wearing crown and labarum, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.6. B.M.C. 15. v. p. 29.

296. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe, surrounded by cross-shaped cross.  $\Delta$  at 12 o'clock. R. pl. 36.7. B.M.C. 15. v. p. 29.

297. The Virgin Mary,  $\Delta$  at three-quarter face to left, between two legs of  $\Delta$ .  $\Delta$  at 12 o'clock. John sit. facing, wearing crown and scepter, and holding labarum and  $\Delta$  at 6 o'clock.  $\Delta$  at 12 o'clock. R. pl. 36.8. B.M.C. 15. v. p. 29.

#### Most of Thessalonica

298. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.9. B.M.C. 15. v. p. 29.

299. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.10. B.M.C. 15. v. p. 29.

300. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.11. B.M.C. 15. v. p. 29.

301. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.12. B.M.C. 15. v. p. 29.

302. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.13. B.M.C. 15. v. p. 29.

303. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.14. B.M.C. 15. v. p. 29.

304. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.15. B.M.C. 15. v. p. 29.

305. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.16. B.M.C. 15. v. p. 29.

306. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.17. B.M.C. 15. v. p. 29.

307. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.18. B.M.C. 15. v. p. 29.

308. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.19. B.M.C. 15. v. p. 29.

309. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.20. B.M.C. 15. v. p. 29.

310. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.21. B.M.C. 15. v. p. 29.

311. *Al. tessaronis*. Obv.  $\Delta$  as 294. R. John sit. facing, wearing crown and scepter, and holding labarum and globe;  $\Delta$  at 12 o'clock.  $\Delta$  at 6 o'clock. R. pl. 36.22. B.M.C. 15. v. p. 29.



THEODORE II,  
Ducas-Lascaris

1 November 1276-August 1286

The coin supports such a view of considerable longevity and volume, but unfortunately is suffered from a severe form of splinter and its value may be derived to less than one year. During this time a great independence developed between the powerful aristocracy and the monarchic center, and this continues to the downfall of the dynasty was when the emperor's death. In foreign affairs Theodore continued his father's policy, but with the attempt to make a complete the eastern signal of the Empire. Succeeded in the latter part of 1276 in capturing the city of Antioch and the restoration of the despotate. Later on we are told that Theodore and in August 1276 just only after the death of his father, he was crowned emperor and the capital established in the city of Constantinople. After that, the Empire's chief center.

Mint of Magnesia



Fig. 1

500. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

501. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

502. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

503. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

Very Fine

504. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

505. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

506. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

507. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

508. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

509. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

510. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

511. A. Hyperperous. Obverse: crowned and bearded face, with a lion's head, holding a shield of Gorgon's head and a scepter. Reverse: a lion's head, holding a shield of Gorgon's head and a scepter. (Theobaldus, *Monnaies*, p. 111, pl. 1, fig. 1, 2.)

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Very Fine

Fine

Fine

Fine

Fine

Fine

Fine





## EMPIRE OF THESSALONICA

MANUEL,  
Cochranes-Deeds

12 94-12 57

Greatly reduced in size and influence after Theodor's defeat, the Empire of Thessalonica maintained a shadow existence under its new ruler Manuel. In 1217 the blind Theodor reappeared at Thessalonica, having been released from captivity by the Bulgarians, and Manuel was deposed.

### Sheet of Thematic



2004

104

[illegible]

Based on the fact of  $M$  over  $\text{dcl}(M)$ , it follows that  $M$  is strongly  $\omega$ -saturated in  $L$ , i.e.,  $M \models \exists x_1 \dots \exists x_n \varphi(x_1, \dots, x_n, a)$  implies  $\exists x_1 \dots \exists x_n \varphi(x_1, \dots, x_n, b)$  for  $a, b \in M$  and  $\varphi$  a formula in  $L$ . Moreover,  $M$  is not  $\omega$ -saturated in  $L$  since  $M \models \exists x_1 \dots \exists x_n \varphi(x_1, \dots, x_n, a)$  and  $M \models \forall x_1 \dots \forall x_n \neg \varphi(x_1, \dots, x_n, b)$  for  $a, b \in M$  and  $\varphi$  a formula in  $L$ . Hence,  $M$  is not  $\omega$ -saturated in  $L$ .  $\square$

[illegible]

<sup>17</sup> Diffen, usually. In the St. Lawrence basin, and in other mountainous regions, the *Staph. quadricornis* complex, which is not at all rare in the St. Lawrence basin, is more common than in the mountains. However, it is not the same as the *Staph. quadricornis* found in the mountains, and it is not the same as the *Staph. quadricornis* found in the mountains. The *Staph. quadricornis* found in the mountains is a new species, and it is not the same as the *Staph. quadricornis* found in the mountains. The *Staph. quadricornis* found in the mountains is a new species, and it is not the same as the *Staph. quadricornis* found in the mountains.

219) The Virgin clothed facing; holding nimbus; tail of the infant Christ before the lozenge; on either side of Virgin's nimbus,  $\text{AB} = \text{AV}$ . R. *quoniam*, *scilicet* [sic] *in* *lit.*, *in* *lit.*. Martin (*on lit.*) and the *Anchora*, *Mk.*, *and*, *scilicet*, and wearing cloak wrapped around him (*on lit.*), holding, facing they hold between their limbs; as lower field so c.

[illegible]

1074 *Male* Insects: Insects of the *Archaeopteryx* subfamily, *Archaeopteryx* and *Archaeopteryx* are both found on the shoulder, and *Archaeopteryx* is found in the 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825

10% headless bait of 4 lure facing, 0.5 and 1.0 m diameter, holding equal  $\alpha_1$  to  $\alpha_2$  in  $M_1$  to  $\alpha_2$  in  $M_2$ .  $\alpha_1$  was 50% (0.50) in  $M_1$ .  $\alpha_2$  was 50% (0.50) in  $M_2$ . The bait was placed in the center of the circular area. The bait was placed in the center of the circular area. The bait was placed in the center of the circular area.

\* Base of 80. Thoracic facing, medially and steeping midline ridge; by both sides deep concave shoulder, and slight notch at top; 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

the anal and pharyngeal cavities and is subcutaneous, not tracheal, in the head; tracheae in dorsal midline from mouth with tracheobronchi on each side to the 4th, 6th, 8th, and 10th segments; tracheae arranged in pairs on each segment, not ventral. Stomach long U-shaped, not transverse, anterior 2/3 of its surface smooth, 1/3 crenulated in shape; large dark brown coloration of the sides, with three dorsal elongate light brown or yellowish spots; small dorsal and 1/2 between these light, narrow, brownish, irregularly shaped spots. *ML*, 79.20-77. *PL* 65.6-67. *R*, 30-31.

4. *St. Ignace*. We will use the text of Christ's teaching, recorded in Luke 11:14-17, 23-26. The original language is Latin. The English text, rendered by the National Council, reads: "And Jesus said to them, 'If I cast out devils by the power of Beelzebub, by what power do the sons of the synagogue cast out devils? If I cast out devils by the power of Beelzebub, by what power do the sons of the synagogue cast out devils? If I cast out devils by the power of Beelzebub, by what power do the sons of the synagogue cast out devils?'"

Fluoride

## EMPIRE OF THESSALONICA

## JOHN. Commentator-Discuss

Reserve 12.12-12.14

129801-129802

*Instead of transmuting the Archa of Thaumaleia Thaumie received his son John (Lazarus) Thaumie, but the blind seerographer was unable to do anything to improve the declining position of his race, and in 1242, following advice from John III the Good, the ruler of Thaumaleia was obliged to acknowledge the sovereignty of Nicaea. John Comnenus-Ducas had to accept the inferior status of subject, and did not, year after year, his people have taken by his brother Theodore.*

### Saint of Thermodynamics

## 114

- 2009 *Billfish* (family *Xiphiidae*, subfamily *Xiphiinae*). 21–28 cm, grey. 1. M. *Brachyura*,  
defensive, with one finning, in 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823

- 2136 Single wing, facing wings spread, looking  $\downarrow$ . R. use a  $\frac{1}{2}$  circle  $\frac{1}{2}$  way. Half-length figure of John, head  $\downarrow$ , shoulders  $\uparrow$  and  $\downarrow$ . St. Demetrius, shoulder and full-length figure of John, head  $\downarrow$ , shoulders  $\uparrow$  and  $\downarrow$ . They both appear in the patriarchal group, on the steps; that also holds again in L.  $R_1, R_2, R_3, R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12}, R_{13}, R_{14}, R_{15}, R_{16}, R_{17}, R_{18}, R_{19}, R_{20}, R_{21}, R_{22}, R_{23}, R_{24}, R_{25}, R_{26}, R_{27}, R_{28}, R_{29}, R_{30}, R_{31}, R_{32}, R_{33}, R_{34}, R_{35}, R_{36}, R_{37}, R_{38}, R_{39}, R_{40}, R_{41}, R_{42}, R_{43}, R_{44}, R_{45}, R_{46}, R_{47}, R_{48}, R_{49}, R_{50}, R_{51}, R_{52}, R_{53}, R_{54}, R_{55}, R_{56}, R_{57}, R_{58}, R_{59}, R_{60}, R_{61}, R_{62}, R_{63}, R_{64}, R_{65}, R_{66}, R_{67}, R_{68}, R_{69}, R_{70}, R_{71}, R_{72}, R_{73}, R_{74}, R_{75}, R_{76}, R_{77}, R_{78}, R_{79}, R_{80}, R_{81}, R_{82}, R_{83}, R_{84}, R_{85}, R_{86}, R_{87}, R_{88}, R_{89}, R_{90}, R_{91}, R_{92}, R_{93}, R_{94}, R_{95}, R_{96}, R_{97}, R_{98}, R_{99}, R_{100}, R_{101}, R_{102}, R_{103}, R_{104}, R_{105}, R_{106}, R_{107}, R_{108}, R_{109}, R_{110}, R_{111}, R_{112}, R_{113}, R_{114}, R_{115}, R_{116}, R_{117}, R_{118}, R_{119}, R_{120}, R_{121}, R_{122}, R_{123}, R_{124}, R_{125}, R_{126}, R_{127}, R_{128}, R_{129}, R_{130}, R_{131}, R_{132}, R_{133}, R_{134}, R_{135}, R_{136}, R_{137}, R_{138}, R_{139}, R_{140}, R_{141}, R_{142}, R_{143}, R_{144}, R_{145}, R_{146}, R_{147}, R_{148}, R_{149}, R_{150}, R_{151}, R_{152}, R_{153}, R_{154}, R_{155}, R_{156}, R_{157}, R_{158}, R_{159}, R_{160}, R_{161}, R_{162}, R_{163}, R_{164}, R_{165}, R_{166}, R_{167}, R_{168}, R_{169}, R_{170}, R_{171}, R_{172}, R_{173}, R_{174}, R_{175}, R_{176}, R_{177}, R_{178}, R_{179}, R_{180}, R_{181}, R_{182}, R_{183}, R_{184}, R_{185}, R_{186}, R_{187}, R_{188}, R_{189}, R_{190}, R_{191}, R_{192}, R_{193}, R_{194}, R_{195}, R_{196}, R_{197}, R_{198}, R_{199}, R_{200}, R_{201}, R_{202}, R_{203}, R_{204}, R_{205}, R_{206}, R_{207}, R_{208}, R_{209}, R_{210}, R_{211}, R_{212}, R_{213}, R_{214}, R_{215}, R_{216}, R_{217}, R_{218}, R_{219}, R_{220}, R_{221}, R_{222}, R_{223}, R_{224}, R_{225}, R_{226}, R_{227}, R_{228}, R_{229}, R_{230}, R_{231}, R_{232}, R_{233}, R_{234}, R_{235}, R_{236}, R_{237}, R_{238}, R_{239}, R_{240}, R_{241}, R_{242}, R_{243}, R_{244}, R_{245}, R_{246}, R_{247}, R_{248}, R_{249}, R_{250}, R_{251}, R_{252}, R_{253}, R_{254}, R_{255}, R_{256}, R_{257}, R_{258}, R_{259}, R_{260}, R_{261}, R_{262}, R_{263}, R_{264}, R_{265}, R_{266}, R_{267}, R_{268}, R_{269}, R_{270}, R_{271}, R_{272}, R_{273}, R_{274}, R_{275}, R_{276}, R_{277}, R_{278}, R_{279}, R_{280}, R_{281}, R_{282}, R_{283}, R_{284}, R_{285}, R_{286}, R_{287}, R_{288}, R_{289}, R_{290}, R_{291}, R_{292}, R_{293}, R_{294}, R_{295}, R_{296}, R_{297}, R_{298}, R_{299}, R_{300}, R_{301}, R_{302}, R_{303}, R_{304}, R_{305}, R_{306}, R_{307}, R_{308}, R_{309}, R_{310}, R_{311}, R_{312}, R_{313}, R_{314}, R_{315}, R_{316}, R_{317}, R_{318}, R_{319}, R_{320}, R_{321}, R_{322}, R_{323}, R_{324}, R_{325}, R_{326}, R_{327}, R_{328}, R_{329}, R_{330}, R_{331}, R_{332}, R_{333}, R_{334}, R_{335}, R_{336}, R_{337}, R_{338}, R_{339}, R_{340}, R_{341}, R_{342}, R_{343}, R_{344}, R_{345}, R_{346}, R_{347}, R_{348}, R_{349}, R_{350}, R_{351}, R_{352}, R_{353}, R_{354}, R_{355}, R_{356}, R_{357}, R_{358}, R_{359}, R_{360}, R_{361}, R_{362}, R_{363}, R_{364}, R_{365}, R_{366}, R_{367}, R_{368}, R_{369}, R_{370}, R_{371}, R_{372}, R_{373}, R_{374}, R_{375}, R_{376}, R_{377}, R_{378}, R_{379}, R_{380}, R_{381}, R_{382}, R_{383}, R_{384}, R_{385}, R_{386}, R_{387}, R_{388}, R_{389}, R_{390}, R_{391}, R_{392}, R_{393}, R_{394}, R_{395}, R_{396}, R_{397}, R_{398}, R_{399}, R_{400}, R_{401}, R_{402}, R_{403}, R_{404}, R_{405}, R_{406}, R_{407}, R_{408}, R_{409}, R_{410}, R_{411}, R_{412}, R_{413}, R_{414}, R_{415}, R_{416}, R_{417}, R_{418}, R_{419}, R_{420}, R_{421}, R_{422}, R_{423}, R_{424}, R_{425}, R_{426}, R_{427}, R_{428}, R_{429}, R_{430}, R_{431}, R_{432}, R_{433}, R_{434}, R_{435}, R_{436}, R_{437}, R_{438}, R_{439}, R_{440}, R_{441}, R_{442}, R_{443}, R_{444}, R_{445}, R_{446}, R_{447}, R_{448}, R_{449}, R_{450}, R_{451}, R_{452}, R_{453}, R_{454}, R_{455}, R_{456}, R_{457}, R_{458}, R_{459}, R_{460}, R_{461}, R_{462}, R_{463}, R_{464}, R_{465}, R_{466}, R_{467}, R_{468}, R_{469}, R_{470}, R_{471}, R_{472}, R_{473}, R_{474}, R_{475}, R_{476}, R_{477}, R_{478}, R_{479}, R_{480}, R_{481}, R_{482}, R_{483}, R_{484}, R_{485}, R_{486}, R_{487}, R_{488}, R_{489}, R_{490}, R_{491}, R_{492}, R_{493}, R_{494}, R_{495}, R_{496}, R_{497}, R_{498}, R_{499}, R_{500}, R_{501}, R_{502}, R_{503}, R_{504}, R_{505}, R_{506}, R_{507}, R_{508}, R_{509}, R_{510}, R_{511}, R_{512}, R_{513}, R_{514}, R_{515}, R_{516}, R_{517}, R_{518}, R_{519}, R_{520}, R_{521}, R_{522}, R_{523}, R_{524}, R_{525}, R_{526}, R_{527}, R_{528}, R_{529}, R_{530}, R_{531}, R_{532}, R_{533}, R_{534}, R_{535}, R_{536}, R_{537}, R_{538}, R_{539}, R_{540}, R_{541}, R_{542}, R_{543}, R_{544}, R_{545}, R_{546}, R_{547}, R_{548}, R_{549}, R_{550}, R_{551}, R_{552}, R_{553}, R_{554}, R_{555}, R_{556}, R_{557}, R_{558}, R_{559}, R_{560}, R_{561}, R_{562}, R_{563}, R_{564}, R_{565}, R_{566}, R_{567}, R_{568}, R_{569}, R_{570}, R_{571}, R_{572}, R_{573}, R_{574}, R_{575}, R_{576}, R_{577}, R_{578}, R_{579}, R_{580}, R_{581}, R_{582}, R_{583}, R_{584}, R_{585}, R_{586}, R_{587}, R_{588}, R_{589}, R_{590}, R_{591}, R_{592}, R_{593}, R_{594}, R_{595}, R_{596}, R_{597}, R_{598}, R_{599}, R_{600}, R_{601}, R_{602}, R_{603}, R_{604}, R_{605}, R_{606}, R_{607}, R_{608}, R_{609}, R_{610}, R_{611}, R_{612}, R_{613}, R_{614}, R_{615}, R_{616}, R_{617}, R_{618}, R_{619}, R_{620}, R_{621}, R_{622}, R_{623}, R_{624}, R_{625}, R_{626}, R_{627}, R_{628}, R_{629}, R_{630}, R_{631}, R_{632}, R_{633}, R_{634}, R_{635}, R_{636}, R_{637}, R_{638}, R_{639}, R_{640}, R_{641}, R_{642}, R_{643}, R_{644}, R_{645}, R_{646}, R_{647}, R_{648}, R_{649}, R_{650}, R_{651}, R_{652}, R_{653}, R_{654}, R_{655}, R_{656}, R_{657}, R_{658}, R_{659}, R_{660}, R_{661}, R_{662}, R_{663}, R_{664}, R_{665}, R_{666}, R_{667}, R_{668}, R_{669}, R_{670}, R_{671}, R_{672}, R_{673}, R_{674}, R_{675}, R_{676}, R$

In addition to the above types there is another large group of teachers (about 10% of the sample) who are much smaller (usually less than 20 min. daily). They seem to show a close affinity to the late waves of the Latin Empire of Constantinople (p. 499) and it is doubtful whether they really constitute part of the regular schools of today (see below, 2.3.4.2).

Six of the datasets included almost have the same types as nos. 2179, 2173, 2117 sometimes with full length figures on nos. 2114, 2119 and 2116 above. Their descriptions of the other number classes are as follows:

- [illegible]

For further details of all three types, see *Fluorination of waste of theory*, the ... also referred to Michael Heide's "Change and Money in the Postmodern Republic" (1991, 179).

**MICHAEL VIII,  
Palaiologos**

12 August 1221-14 May 1281 (1280)  
 100-105 years old, 1220-1290



216

**DEMETRIUS, Comnenus-Ducas**

Doge 1240-1245

The final collapse of the Comnenian line occurred in the early 1240s, with the death of the last emperor, John III, in 1241. His son, Michael VIII, had been deposed in 1241, and his son, Michael VIII, had been deposed in 1241, and his son, Michael VIII, had been deposed in 1241.

The final collapse of the Comnenian line occurred in the early 1240s, with the death of the last emperor, John III, in 1241. His son, Michael VIII, had been deposed in 1241, and his son, Michael VIII, had been deposed in 1241.

**ANDRONICUS II**

ANDRONICUS II, co-emperor from 1221

Andronicus II, the last emperor of the Palaiologos, was born in 1221, and died in 1281. He was the son of Michael VIII, and he was the last emperor of the Palaiologos. He was the son of Michael VIII, and he was the last emperor of the Palaiologos.

Andronicus II, the last emperor of the Palaiologos, was born in 1221, and died in 1281. He was the son of Michael VIII, and he was the last emperor of the Palaiologos. He was the son of Michael VIII, and he was the last emperor of the Palaiologos.

**ANONYMOUS THESSALONICAN ISSUE OF 1281-1282  
 Attribution**

The Thessalonian issue of 1281-1282

1

1. The Thessalonian issue of 1281-1282, attributed to the anonymous Thessalonian issue of 1281-1282, is a gold coin of the Palaiologos dynasty, issued in Thessalonica. It is a gold coin of the Palaiologos dynasty, issued in Thessalonica.



2. The Thessalonian issue of 1281-1282, attributed to the anonymous Thessalonian issue of 1281-1282, is a gold coin of the Palaiologos dynasty, issued in Thessalonica. It is a gold coin of the Palaiologos dynasty, issued in Thessalonica.

**Mint of Magnesia**

Mint of Magnesia, 1281-1282, issued in the name of the emperor

1. The Thessalonian issue of 1281-1282, attributed to the anonymous Thessalonian issue of 1281-1282, is a gold coin of the Palaiologos dynasty, issued in Thessalonica. It is a gold coin of the Palaiologos dynasty, issued in Thessalonica.

The Thessalonian issue of 1281-1282, attributed to the anonymous Thessalonian issue of 1281-1282, is a gold coin of the Palaiologos dynasty, issued in Thessalonica. It is a gold coin of the Palaiologos dynasty, issued in Thessalonica.

Very Fine

- 2124 **Bitten heavily.** St. Tryphon sig. facing, holding cross, to L., a wider one to the above [sig. to R., w. to above] to L. Michael and crossed by the Virgin (to R.), both sig. facing, emperor holds cross from above and standing between them both, P. in upper field to L., w. to R.,  $2.1/26 \times 1.3/17$  [to L., w. to R. to L. for anchors. R. pl. w. L. B. M.C.], p. 225. R. — *Ac. Vigney of Nicaea*, 3.
- 2125 Christ enthroned facing r. seated in Paradise on a solid rock, holding book of Gospels to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and globe underneath his petaschos, cross to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. B.M.C. — P. — *Ep. G. The Roman Empire*, 4.
- 2126 **At anastasis.** Christ sig. facing on a dark solid rock, holding book of Gospels to L., w. to R., w. to L. Michael sig. facing, wearing crown, labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*

Mint of Constantinople

Aureus Pro



2124

- 2127 **At hypopycnosis of earth.** The Virgin enthroned sig. facing, holding book of Gospels to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*



2128

- 2128 **At hypopycnosis of earth.** The Virgin enthroned sig. facing, holding book of Gospels to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*

Very Fine  
C

- 2129 **At anastasis.** Headless bust of Christ facing, holding scroll to L., to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*
- 2130 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*
- 2131 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*

Very Fine  
C

940

100

125

Fine

- 2132 **Bitten heavily.** Christ sig. facing, holding book of Gospels to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*
- 2133 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*
- 2134 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*



2135

- 2135 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*
- 2136 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*
- 2137 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*
- 2138 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*
- 2139 The Virgin enthroned facing, holding labrum to L., w. to R., w. to L. Michael sig. facing, wearing crown and chiton, and holding labrum and scepter, and holding cross to L. globe; under the upper field to L., to L., w. to R., w. to L. [sig. to L.], R. pl. w. L. B. M.C. 17. — P. Th. — *N. G.*

940

100

125

150

175

200

225

250

275

300

325

350

375

400

- 2180 **Hilton ready.** St. Michael, sig. (9 facing to L, 10 p. 4 p. 12 sig. to R, 13 sig. to L) fol. 10. Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*



2180

- 2181 The deacon, Iakovos, wearing chlamys and sig. (9 facing to L, 10 p. 4 p. 12 sig. to R, 13 sig. to L) fol. 10. Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*

- 2182 **End of St. Nicholas' feast.** Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*

- 2183 **End of St. Nicholas' feast.** Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*



2183

- 2184 **St. Nicholas' feast.** Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*

- 2185 **St. Nicholas' feast.** Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*

Full-page illumination of the deacon, Iakovos, wearing chlamys and sig. (9 facing to L, 10 p. 4 p. 12 sig. to R, 13 sig. to L) fol. 10. Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*

File  
L

# Miss of Translation

None of these were probably struck in the period 1259-1261, before the capture of Constantinople.

- 2186 **Hilton ready.** Large pentachal cross; two stars in upper field to L and in p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*
- 2187 **The Virgin Mary.** Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*
- 2188 **The Virgin Mary.** Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*
- 2189 **The Virgin Mary.** Michael and John, wearing crown and chlamys, and holding scepter and orb; facing to L, p. 10 p. 12 p. 13, to R, to L, to R. *BM 1971. 10. 10. 13.*

File  
L



ANDRONICUS II,  
Palaeologus

Severin Beporov L. Dornikher (1861-26 May 1939 (died 15 Feb. 1932).



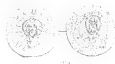






JOHN S.  
Palacalangu

1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 26



## A. S. KOTLYAROVA, 1991, p. 1139.

Belmont, MI County records, <http://www.belmontmi.org>, 18 May 2017, April 1951.

86. 本報社址：新加坡，萊佛士，萊佛士，新加坡。 87. 本報社址：新加坡，萊佛士，萊佛士，新加坡。

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48540: *cf. Krasov, 1948: p. 21, table No. 1, and 1951: p. 10.*

John Patai, Jr., an elderly man, was still in the state of confusion. At the time of the episode, immediately developed between the Grandfather John Patai, Jr. and the two great-grandchildren of his, a 12-year-old boy and a 10-year-old girl, both of whom were John Patai, Jr.'s grandchildren and in 1961 he was 80 years old. The boy, who had been in the hospital and in the hospital, was 12 years old at the time of the episode and in 1961 he was 10 years old. The girl, who had been in the hospital and in the hospital, was 10 years old at the time of the episode and in 1961 she was 8 years old. The boy, who had been in the hospital and in the hospital, was 12 years old at the time of the episode and in 1961 he was 10 years old. The girl, who had been in the hospital and in the hospital, was 10 years old at the time of the episode and in 1961 she was 8 years old.

[illegible]

The authors point out that 17% of the sample had no significant change in their  $\alpha$  values. They also point out that more than 11% of the sample had no significant change in their  $\beta$  values. It is important to realize that the  $\alpha$  and  $\beta$  values are not the same as the  $\alpha$  and  $\beta$  values in the structural equation model. The  $\alpha$  and  $\beta$  values in the structural equation model are the same as the  $\alpha$  and  $\beta$  values in the structural equation model. The  $\alpha$  and  $\beta$  values in the structural equation model are the same as the  $\alpha$  and  $\beta$  values in the structural equation model.

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For a more complete discussion of the "cultural turn" in the social sciences, see, for example,

### Notes of Contributors



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(1) A hypopygium (H) consists of: Anal of Sauer (19), Anal Y of Sauer (20), having each a sensory organ; two long bristles, the longest on the hind leg, but not on the 1st; 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111th, 112th, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 154th, 155th, 156th, 157th, 158th, 159th, 160th, 161st, 162nd, 163rd, 164th, 165th, 166th, 167th, 168th, 169th, 170th, 171st, 172nd, 173rd, 174th, 175th, 176th, 177th, 178th, 179th, 180th, 181st, 182nd, 183rd, 184th, 185th, 186th, 187th, 188th, 189th, 190th, 191st, 192nd, 193rd, 194th, 195th, 196th, 197th, 198th, 199th, 200th, 201st, 202nd, 203rd, 204th, 205th, 206th, 207th, 208th, 209th, 210th, 211st, 212nd, 213th, 214th, 215th, 216th, 217th, 218th, 219th, 220th, 221st, 222nd, 223rd, 224th, 225th, 226th, 227th, 228th, 229th, 230th, 231st, 232nd, 233rd, 234th, 235th, 236th, 237th, 238th, 239th, 240th, 241st, 242nd, 243rd, 244th, 245th, 246th, 247th, 248th, 249th, 250th, 251st, 252nd, 253rd, 254th, 255th, 256th, 257th, 258th, 259th, 260th, 261st, 262nd, 263rd, 264th, 265th, 266th, 267th, 268th, 269th, 270th, 271st, 272nd, 273rd, 274th, 275th, 276th, 277th, 278th, 279th, 280th, 281st, 282nd, 283rd, 284th, 285th, 286th, 287th, 288th, 289th, 290th, 291st, 292nd, 293rd, 294th, 295th, 296th, 297th, 298th, 299th, 300th, 301st, 302nd, 303rd, 304th, 305th, 306th, 307th, 308th, 309th, 310th, 311st, 312nd, 313th, 314th, 315th, 316th, 317th, 318th, 319th, 320th, 321st, 322nd, 323rd, 324th, 325th, 326th, 327th, 328th, 329th, 330th, 331st, 332nd, 333rd, 334th, 335th, 336th, 337th, 338th, 339th, 340th, 341st, 342nd, 343rd, 344th, 345th, 346th, 347th, 348th, 349th, 350th, 351st, 352nd, 353rd, 354th, 355th, 356th, 357th, 358th, 359th, 360th, 361st, 362nd, 363rd, 364th, 365th, 366th, 367th, 368th, 369th, 370th, 371st, 372nd, 373rd, 374th, 375th, 376th, 377th, 378th, 379th, 380th, 381st, 382nd, 383rd, 384th, 385th, 386th, 387th, 388th, 389th, 390th, 391st, 392nd, 393rd, 394th, 395th, 396th, 397th, 398th, 399th, 400th, 401st, 402nd, 403rd, 404th, 405th, 406th, 407th, 408th, 409th, 410th, 411st, 412nd, 413th, 414th, 415th, 416th, 417th, 418th, 419th, 420th, 421st, 422nd, 423rd, 424th, 425th, 426th, 427th, 428th, 429th, 430th, 431st, 432nd, 433rd, 434th, 435th, 436th, 437th, 438th, 439th, 440th, 441st, 442nd, 443rd, 444th, 445th, 446th, 447th, 448th, 449th, 450th, 451st, 452nd, 453rd, 454th, 455th, 456th, 457th, 458th, 459th, 460th, 461st, 462nd, 463rd, 464th, 465th, 466th, 467th, 468th, 469th, 470th, 471st, 472nd, 473rd, 474th, 475th, 476th, 477th, 478th, 479th, 480th, 481st, 482nd, 483rd, 484th, 485th, 486th, 487th, 488th, 489th, 490th, 491st, 492nd, 493rd, 494th, 495th, 496th, 497th, 498th, 499th, 500th, 501st, 502nd, 503rd, 504th, 505th, 506th, 507th, 508th, 509th, 510th, 511st, 512nd, 513th, 514th, 515th, 516th, 517th, 518th, 519th, 520th, 521st, 522nd, 523rd, 524th, 525th, 526th, 527th, 528th, 529th, 530th, 531st, 532nd, 533rd, 534th, 535th, 536th, 537th, 538th, 539th, 540th, 541st, 542nd, 543rd, 544th, 545th, 546th, 547th, 548th, 549th, 550th, 551st, 552nd, 553rd, 554th, 555th, 556th, 557th, 558th, 559th, 560th, 561st, 562nd, 563rd, 564th, 565th, 566th, 567th, 568th, 569th, 570th, 571st, 572nd, 573rd, 574th, 575th, 576th, 577th, 578th, 579th, 580th, 581st, 582nd, 583rd, 584th, 585th, 586th, 587th, 588th, 589th, 590th, 591st, 592nd, 593rd, 594th, 595th, 596th, 597th, 598th, 599th, 600th, 601st, 602nd, 603rd, 604th, 605th, 606th, 607th, 608th, 609th, 610th, 611st, 612nd, 613th, 614th, 615th, 616th, 617th, 618th, 619th, 620th, 621st, 622nd, 623rd, 624th, 625th, 626th, 627th, 628th, 629th, 630th, 631st, 632nd, 633rd, 634th, 635th, 636th, 637th, 638th, 639th, 640th, 641st, 642nd, 643rd, 644th, 645th, 646th, 647th, 648th, 649th, 650th, 651st, 652nd, 653rd, 654th, 655th, 656th, 657th, 658th, 659th, 660th, 661st, 662nd, 663rd, 664th, 665th, 666th, 667th, 668th, 669th, 670th, 671st, 672nd, 673rd, 674th, 675th, 676th, 677th, 678th, 679th, 680th, 681st, 682nd, 683rd, 684th, 685th, 686th, 687th, 688th, 689th, 690th, 691st,

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[illegible]

1. Assume that  $\mathcal{C}$  is a  $\mathcal{C}_0$ -category,  $\mathcal{C} = \langle \text{Ob } \mathcal{C}, \text{Hom}_{\mathcal{C}} \rangle$  and  $\mathcal{C}$  is a  $\mathcal{C}_0$ -category,  $\mathcal{C} = \langle \text{Ob } \mathcal{C}, \text{Hom}_{\mathcal{C}} \rangle$ .









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